THE

FARMER'S MAGAZINE:

MONDAY, 7. NOVEMBER 1803.

(No. XVI.)

BRANCH I.

ORIGINAL COMMUNICATIONS.

TO THE CONDUCTORS OF THE FARMER'S MAGAZINE.

Account of the Eddleſtone Farming Club.

SIR,

THE extenſive circulation of your Magazine, has excited a general ſpirit of inquiry among farmers, as the exiſting ſpirit of inquiry has tended to the more extenſive circulation of your Magazine. Farmers are forming themſelves into clubs, for the purpoſe of diſcuſſing farming topics, inſtead of that of hard-drinking.

I cannot but approve of ſuch inſtitutions, as both a rational and improving mode of ſocial intercourſe; but, as example ſtimulates to imitation, more powerfully than precept to obſervance, I ſhall lay before your readers, a ſhort account of the inſtitutions, and the proceedings of a Club of practical farmers, which commenced laſt winter in the pariſh of Eddleſtone and county of Tweeddale, that thoſe who are pleaſed with the precedent may go and do likewiſe.

The club is limited to ſuch numbers as can conveniently meet alternately, once a month, at each other's houſes; where the landlord gives a plain dinner of beef and greens, with whiſky punch, for the encouragement of the growth of barley.

To prevent all chances of diſcord, the topics of religion and politics are excluded, and diſcuſſion is confined to farming;—for the ſame purpoſe, one black ball, at the ballot, excludes any new member propoſed for admiſſion.

To prevent confuſion, one only muſt ſpeak at a time, addreſſing himſelf to the preſes; who has power to impoſe ſmall fines for

rudeneſs, indecency, &c.; his authority being ſanctioned by the penalty of excluſion in caſe of diſobedience.

A ſmall annual payment, together with fines for abſence, &c. go to purchaſe books for a common library. The firſt book purchaſed was your Magazine.

The other rules are juſt ſuch as common ſenſe readily dictates for all ſuch inſtitutions; I ſhall not therefore dwell upon a minute ſpecification, but merely notice one which may perhaps be conſidered as not inexpedient.—In caſe of diſagreement between two members, either on account of ſuppoſed perſonal inſult, or from miſunderſtanding of the terms of a bargain, in the courſe of daily tranſactions; ſaid members are bound to ſettle their difference, by the arbitration of any three club members they ſhall agree upon; and ſhall not go to law, under penalty of excluſion from the Club.

At each meeting, a farming topic is given out as the ſubject of diſcuſſion at the enſuing one; and (as is neceſſary in all meetings of the kind) it is found expedient that ſome member in particular ſhould come peculiarly prepared, either with a written eſſay, or to ſpeak at large to the queſtion. One plain country farmer has delivered in four eſſays on different ſubjects, written with good ſenſe, and intelligibly expreſſed, which I have ſeen. A very ſhort account of theſe will convey to other practical farmers a general notion of what their Eddleſtone brethren are about.

The firſt is upon the queſtion of the preference of a four-ſhift or five-ſhift rotation after dunging (the ſhifts, there, moſt commonly in practice on the land in conſtant culture) for the light turnip ſoil of Eddleſtone water.

The farmer obſerves, in general, that, upon the four-ſhift rotation, all the crops may be expected to be better; both, becauſe the land is kept more thoroughly clean, from the quicker recurrence of the fallow; and alſo, becauſe none of them are ſo far from the dunging as the laſt one of the five-ſhift courſe muſt be; beſides that more dung may be made from the greater proportion of turnip crop.

The five-ſhift courſe muſt either admit of *peas* after the oat crop; or of *a ſecond year of hay crop*; or of *a year's paſture* after the hay crop.—Peas are objected to, being a precarious crop, and generally allowing the ground to become poiſoned with graſs roots, or other weeds: If, indeed, they were drilled and horſehoed, with a little dung, the rotation might be more properly extended to ſix ſhifts; that is, by taking a crop of oats after the peas: But as peas muſt be ſown ſo much earlier than turnip, as not to allow of the ſame preparatory ſpring fallowing before ſowing, and, at any rate, in growing, ſoon interrupt the progreſs

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of the plough, a drilled peas fallow is nothing comparable to a turnip one;—beans, though eaſier horſe-hoed, are inadmiſſible in our late climate. In regard to a ſecond year of cut hay, experience has uniformly ſhown, that it never produces half a crop; and, from want of thorough cover, the land is ſuffered to run to weeds. As to one year's paſture after hay; if the land has been ſo properly ſown as to yield good hay, it cannot have ſufficiency of cloſe ſward to make good paſture; or, if ſown thick enough for good paſture the ſecond year, the plants would ſtarve one another, and produce no weight of hay crop. Indeed, where ſeveral years paſture is admitted into an extenſive rotation, by which a farmer, whoſe ſituation ſuits it, intends to go over all his farm with improvement; it is recommended that the land ſhould be ſown, entirely with a view to paſture; and ſhould be paſtured from the firſt, without being cut at all.

From ſuch preliminary obſervations (which the following table will make more plain), a calculation is inſtituted of the relative produce of a rotation of four and that of five ſhifts.

Four Shifts.

	Produce per Acre.
1ſt, Turnip, at 3l. 10s. per acre, deducting 2s. for feed, - - - -	L. 3 8 0
2d, Barley, 8 bolls per acre, at 18s. per boll, deducting half a boll for ſeed at 9s. -	6 15 0
3d, Hay, at 200 ſtone per acre, at 7½d. per ſtone, deducting 17s. for ſeed -	5 8 0
4th, Oats, 7 bolls per acre, at 15s. deducting one boll for ſeed - - - -	4 10 0
	L. 20 1 0

The average produce of an acre, under this rotation, is therefore 20l. 1s. divided among four, or 5l. 3d.

Five Shifts.

To effect this extent of rotation, a ſecond cutting of hay, or a year's paſture, muſt be brought in after No. 3d in the foregoing rotation, or elſe a crop of peas after No. 4th. Neither of them would be profitable; and, indeed, none of the above numbers would be ſo good as under the rotation of four ſhifts. But to afford all fair play to the five-ſhift rotation, we ſhall allow that all its crops ſimilar to that of four ſhifts ſhall be equally good; and we ſhall take the ſecond year's hay crop, or the year's paſture after hay, or the peas after oats, all of them at the value of

Carry over - L. 20 1 0

Brought over -	L. 20	1	0
a decent crop of peas; which we ſhall rate at a produce of 4 bolls per acre (though Lord Kaimes only rates peas at 2, or 2½); thence 4 bolls at 16s. deducting 1 boll for ſeed - - - -	2	8	0
L. 22	9	0	

This, added to the return per acre of the ſimilar crops, at the ſame rate as in the four-ſhift rotation, gives 22l. 9s.; which, divided among five acres, averages 4l. 9s. 9½d. per acre.

By this calculation, upon a farm of 100 acres, the yearly difference of produce from a four-ſhift rotation, would exceed that from one of five ſhifts by 52l. 1s. 8d.

In a ſecond eſſay upon the proper mode of preparing land for turnip, I find a particular mode of ribbing recommended by good reaſons. The ſtubble of the preceding crop is to be firſt clean ploughed and harrowed; the ribbing is then directed to run aſlant the former direction of ploughing, where wetneſs does not prevent, at about an angle of 20 degrees; the ribbing is begun at the middle, and extended out to each hand; the near horſe going always in the hollow furrow, and the right hand one on the firm land; ſo that the earth raiſed never falls into a hollow furrow previouſly formed. If the land is perfectly clean, juſt ſplit theſe ribs over dung laid in the hollows, and ſow turnip on the new ridge.

In a third eſſay, upon lifting and laying down various ſpecies of outfield, the only thing I ſhall ſtate, is a mode of renovating outfield, which had been previouſly limed and exhauſted by cropping—a ſituation frequently to be met with. Firſt, a complete ſummer fallow: The land then to be laid up in ridges, like thoſe formed for drilled turnip, through winter: Next ſummer, reverſe theſe ridges repeatedly, merely by cleaving them: To lye all next winter in this form of ridges: Next ſpring, to dung the hollows with compoſt, which hath in the interim been prepared; this to be covered by cleaving the ridges; and on the new ridges, formed by this operation, ſow turnip, to be conſumed upon the field. The *rationale* of the practice is, to obtain every poſſible atmoſpherical advantage, by the long expoſure of as much ſurface as poſſible.

In a fourth eſſay, upon the rearing of black cattle, after various rules as to choice of breeders, ſome obſervations occur in regard to the poſſibility and economy of rearing calves on very little milk, by the ſubſtitution of hay or lintſeed teas. As it was ſtated, that Sir George Montgomery, had raiſed 20 calves laſt ſeaſon, with almoſt no more milk than was ſufficient to initiate them to the practice of drinking hay or lintſeed teas, which calves were then (beginning of Auguſt) all alive and thriving;

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ſome of the members, who rear each 5 or 6 calves a piece yearly, reſolved, that each ſhould riſk a calf, in verifying the experiment, againſt next ſeaſon, and report to the Club.

If you think the publication of this may be of uſe, publiſh it; if not, I need not direct one of your extenſive intelligence, to the proper uſe of waſte paper. Yours, &c. C. F.

NOTE BY THE CONDUCTOR.

We obſerve the proceedings of our Eddleſtone Brethren with much ſatisfaction, and would rejoice were ſimilar inſtitutions formed in every diſtrict, or extenſive pariſh, in Scotland. The rules adopted by the Club, ſeem well calculated for general imitation; and it is only from a ſteady adherence to them, that regularity can be maintained, or the inſtitution itſelf ſecured from a ſpeedy diſſolution.

The arguments in favour of a four-courſe ſhift are judiciouſly ſtated. In fact, they are ſanctioned by the practice of our beſt agriculturiſts. A five, or a ſeven-courſe ſhift, forms no part of our creed, as they conſtantly lead to graſs cropping.

It will give give us pleaſure to hear frequently from the Club, and particularly concerning the trials intended to be made, of hay or lintſeed teas, inſtead of milk, in the rearing of calves. If ſuch ſubſtitutes are found to anſwer, the expence of rearing calves muſt be much reduced, and the articles of milk and butter become more plentiful in our markets. N.

TO THE CONDUCTOR OF THE FARMER'S MAGAZINE.

On the Manufacture of Dunlop Cheese.

SIR,

HAVING ſeen ſeveral Numbers of your Magazine, and remarked, that none of your Correſpondents have treated on the Management of the Dairy, although a ſubject truly connected with rural affairs; I am therefore, induced to ſend you the following obſervations. In this part of the weſt country, in the immediate vicinity of Dunlop pariſh,* where the very name, at a diſtance, gives an agreeable flavour to the cheeſe dairy, huſbandry is well underſtood. I have therefore taken the liberty of giving you a few thoughts on the proceſs of making that article, which poſſibly will afford ſome entertainment to your numerous readers.

When a farmer is poſſeſt of a dozen of milch cows, or upwards, it is generally allowed that the beſt cheeſes are made, when this is done every day, that is, the one half of the milk im-

* County of Ayr.

mediately from the cows, and the other not above twelve hours old; then the milk will not readily have contracted any taint from the dishes in which it is kept, nor from the weather, which it is apt to do in summer; and the newer the milk is, it will consequently require the less thickening to curdle it. Very little depends on the size of the cheese; it may be equally good from 20 to 60 pounds. The common mode of making them here, is this. After the milk is brought to a certain degree of heat, (no doubt, the nearer that of new milk the better), it is all put into a large vessel, made on purpose, where it receives the thickening, and is covered close up for a short time, perhaps ten or twelve minutes, when, if the thickening is good, it will be curdled; then it is gently stirred about, when the whey begins immediately to separate, which is always taken off as it gathers, until the curd begins to turn pretty solid; afterwards, it is generally put into a drainer, a dish also made on purpose, with small holes in the bottom, on the cover of which any convenient weight is applied. When it has stood some time this way, and pretty dry, it is returned again into the first dish, where it is cut into very small pieces, by means of a knife, which has three or four blades, fixed on prongs from the handle, which cut in a horizontal position; and then it is salted, and properly mixed by the hand. Lastly, it is put into a *cheesitt*, which is a stout made dish with iron hoops, and a cloth is put between this dish and the curd, which has a cover that goes exactly into it. In this state it is put into the press, which is a large square stone, commonly from 12 to 20 cwt. fixed in a wooden frame, with an iron screw in the middle for raising and lowering it: every now and then it is taken out, and dry cloths put round it, until it parts with the whey completely. When this is suspected to be the case, it is laid aside for a day or two, when, if there is the least appearance of whey, it must again be put into the press for a few hours, and the cloth will always indicate if any whey remains. As soon as it is ascertained that there is none, the cheese is laid past, upon boards made on purpose, which should always be as broad as the cheese. Sometimes it is laid upon a deal floor; but wherever they are laid, care should be taken to turn them frequently, and to clean the boards or floor they lye on, and to notice if they keep from running any whey, as no cheese will keep well that has the least whey remaining; and when that part sours, a disagreeable taste is generally communicatd to the whole cheese. Indeed the material article in making cheese is, to be attentive to have the thickening (or rennet, as it is called in some places), particularly sound and good, as the smaller the quantity that is used, the better for the cheese; and it is impossible to have a good cheese, where an immoderate quantity is used; for, besides

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giving the cheeſe a very bad taſte and ſmell, it acts generally as yeaſt upon it in the curing, and blows up the cheeſe full of ſmall holes: this will alſo happen, though in a leſs degree, by allowing the cheeſe to lye too long on one ſide. There are a number of modes, after the cheeſes are cured, of poliſhing them for market; but theſe are rather a hurt, than any advantage; all that is neceſſary, beſides turning, is to give them a rubbing, now and then, with a hard coarſe cloth, particularly after harveſt, when they will tend to breed mites. So fond are ſome of the colour of cheeſes on the outſide, that I have ſeen numbers of Engliſh cheeſes, ſet off for market, by painting them with Spaniſh brown and lintſeed oil. There are a number of pariſhes round Dunlop, that make cheeſes equally good, and in far greater quantity; and indeed, from a good part of Ayrſhire, when once the cheeſes are carried to a diſtance, they are known by the name of Dunlop cheeſes. In this part of the country, however, there is not much butter made, and conſequently, the people are not ſo well acquainted with the manufacturing of that article. If any of your Correſpondents, would give their information, concerning the beſt mode of managing and curing of butter, both from milk and cream, it would be eſteemed obliging, by ſome of your readers. If theſe few hints are agreeable, you may hear from me afterwards. And in the mean time, wiſhing every ſucceſs to your uſeful Work, I am, Sir, yours,

AMICUS.

Dalry, 3. *June* 1803.

TO THE CONDUCTOR OF THE FARMER'S MAGAZINE.

On the Cultivation of Moſſes.

SIR,

IN the February Number of your Magazine, I obſerve a query concerning the culture of moſſes, by a gentleman, who ſubſcribes himſelf *Novice Junior*. The improvement of Moſs, without the aid of lime, is a ſubject which has, of late, occupied a conſiderable part of my attention. I would not, however, have taken it upon me to anſwer the query of Novice Junior, had it not occurred, that others, of greater obſervation and experience, might, from the ſame feelings, be induced to withhold their more valuable information.

In this part of the country, conſiderable tracts of peat moſs, have lately been brought into cultivation. The general method of improvement has been by liming, which, with the forming into ridges, is often attended with an expence of eight or ten pounds an acre. Burning of the moſs, has been ſucceſsfully tried by ſeveral perſons, although it is much decried by the favourers of

the *Swindridgemuir Syſtem.* As this is the only method I know, of bringing any extent of moſs into cultivation, *without the benefit of lime,* I ſhall attempt to give your Correſpondent ſuch directions for practiſing that mode of culture, as I have learned from obſervation, and from the experience of others.

When the moſs is very dry in ſummer, let ſmall fires be kindled in thoſe places which are a little elevated; or where, from the ſurface being broken, the turf has begun to rot. Small patches may by theſe means be burnt, at ſuch convenient diſtances, that the aſhes may, for the moſt part, be thrown or ſpread over the whole ſurface, with a ſpade or ſhovel. After the field has been thus burnt, it may be formed into ridges, and the aſhes ſpread as the labour advances.

If the ſurface of the moſs be ſmooth and unbroken, it may not be eaſily burnt in the manner above recommended. It muſt, therefore, be previouſly formed into ridges with the plough or ſpade, leaving a ſtripe of ſix or eight inches breadth in every fur unturned. Theſe ſtripes muſt afterwards be cut into very thin ſlices, and thrown on the ridges to dry. A proper opportunity muſt then be taken, for kindling them in different places of the field, when the fire will ſpread over the whole ſurface, and leave it covered with a fine cruſt of aſhes. It will readily occur, that the beſt time for burning muſt be, before the drought has penetrated to any conſiderable depth; for if the ſurface be covered with aſhes to the thickneſs of an inch, or two inches, it is abundantly ſufficient. When the moſs has been laboured during the winter months, it is generally burnt the following ſpring. I have been informed by one perſon, that (when there was an appearance of rain,) he has often ſet fire to his moſs in the morning, and ſown the ſeed before night. In thoſe places where the fire was not extinguiſhed, before ſowing, he would have beat the ſurface with a ſpade, or ſmothered it by throwing on a little moſs. The aſhes would have been ſo warm, that the ſeed would literally have jumped; yet the vegetation was ſo quick, that although his neighbours had been two weeks earlier in ſowing upon their clay lands, his crop would have been ſooneſt cut.

It may be here obſerved, that beſides burning after the manner I have explained, ſome people give a light dreſſing, of perhaps 40 or 50 bolls of ſlacked lime, or at the rate of five or ſix tons of ſtones, per acre. I am aſſured that the lime will do no manner of good to the two firſt crops, as theſe, with the aſhes alone, are generally rather too ſtrong as otherwiſe; but if the cropping is to be longer continued, a ſmall quantity of lime will be of ſervice. Novice Junior may, however, agree with me in opinion, that inſtead of following our plan, of taking three or more ſucceſſive crops of oats from newly improved peat-moſs, it would

would be advantageous to lay it down earlier with graſs ſeeds; for it will be obſerved, that theſe freſh ſoils are peculiarly favourable to the raiſing of hay crops. The hay ſeed generally ſown on theſe ſoils, is called ſoft graſs. It admits of being cut for ſeveral years; and the ſecond year's crop is always better than the firſt.

When a ſufficient quantity of dung can be procured, ſome reckon it good management, to plant the moſs the firſt year with potatoes, in the form of lazy beds. Two of theſe beds may afterwards be thrown together; and when ſown next ſeaſon with oats, a good crop always follows. It is, however, allowed, that the benefit of this manure is ſooner loſt than that of lime or aſhes.

It now remains, to ſpeak of the expence attending the cultivation of peat-moſs by burning. The ridges are moſt commonly formed with the ſpade, and by a mode of digging, called *couping*; which is, by cutting the turf into oblong pieces, and turning them about half over, or on their edges, ſo as to reſemble ploughing. When the moſs is ſmooth, and eaſily turned, it may be digged in this manner, for from forty to fifty ſhillings per acre. Others approve of the common method of digging, which they call turn-ſpading, or turn-ſpaded, but it is more expenſive. The burning may be done for from ten to fifteen ſhillings per acre. And the only other piece of labour ſeems to be, the covering of the ſeed, which may be done with a thorn buſh, or with hand hoes, or with a light harrow, as the turf is more or leſs tender.

The expence therefore per acre will be nearly as follows:

Digging - - - -	L.	2	5 0
Burning and ſpreading the aſhes - -		0	10 0
Covering the ſeed, four perſons being ſufficient to the hoeing of one acre in a day - -		0	10 0
Expence of labour - -	L.	3	5 0

If the ridges are formed with the plough, it is preſumed that at leaſt twenty ſhillings may be deducted from the article of digging.

If you ſhall conſider this paper to be deſerving of the attention of Novice Junior, I will thank you for inſerting it in your Magazine. The name of the writer can add nothing to its value. Novice Junior may, however, reſt aſſured, that it contains nothing upon the ſubject of burning, but what has been practiſed by others, and what I myſelf intend immediately to adopt, in the improvement of a conſiderable tract of peat-moſs, in a high, unfavourable ſituation. Only, I will attempt to raiſe turnips, on a part, as a firſt crop; and I will lay down a piece of the very coarſeſt with graſs ſeeds, without taking a crop of grain. I will

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alſo try ſome experiments; which, if ſucceſsful, ſhall be communicated to Novice Junior, through the channel of your Magazine. I am, Sir, your very humble ſervant,

Ayrſhire, 28. March, 1803. D.

FOR THE FARMER'S MAGAZINE.

On improving Peat-Bogs, by Paring and Burning. Extracted, by permiſſion, from Mr Steele's Manuſcript Hiſtory of Peat-moſs.

AFTER a peat-moſs hath been effectually drained, although it will, of its own accord, in time, produce plenty of graſs for cattle; yet it is expedient, in order to obtain quickly the beſt crops, to level, pare, and burn its ſurface.

Some moſſes have been pitted for fuel; and the generality of thoſe that are in a ſtate of nature, have a very unequal ſurface, riſing into hillocks of a ſoft and ſungous texture. The pits ſhould be filled up with a portion of what is pared off the hillocks; and the remainder of the ſubſtance of theſe hillocks, and, in general, all the looſe, ſoft ſurface of the bog, ſhould be burnt. Some inches deep, alſo, of the former peat ſurface, ſhould be pared off and burnt.

In the Agricultural Report for Suffolk, the following juſt remark is made on this ſubject: 'It is ſcarcely poſſible to bring boggy, moory, peat ſoils, from a ſtate of nature into cultivation, without the aſſiſtance of fire; which never fails, but becauſe the men employed do not pare deep enough.'

Thomas Kinnear Eſq. of Kinloch, in the county of Fife, began to improve a very deep peat-moſs on his eſtate, about fourteen years ago. It was then covered with heath, and did not yield the value of ſixpence per acre. He has now let part of it for upwards of 2l. per acre.

After draining this moſs, Mr Kinnear cut off, with a common ſpade, all the heights and riſing tufts of the ſoil, and alſo a great deal of the coarſe peat, full of recent fibrous roots; and what remained of the turfs, after filling up holes, and levelling inequalities, were collected together, and piled up in heaps to dry, and thereafter burnt, and the aſhes ſpread on the ſurface, ſo as to cover it nearly half an inch in thickneſs.

The aſhes, as ſoon as produced, were ſpread and mixed with the peat ſoil, to prevent their becoming the ſport of the winds, or being exhauſted in detached ſpots by rains.

From the effectual drainage which this peat-bog received, it ſunk and conſolidated, ſo as to be able to bear a plough and horſes in the courſe of the ſecond year after it was drained. This gentleman attributes a great deal to the aſhes thus obtained

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from the ſoil itſelf, for procuring him excellent crops of graſs and corn, ever ſince his moſs was in culture.

The expence of levelling, and paring and burning, muſt depend on the ſituation of the ſurface of a peat-bog. I find it eſtimated at different prices, accordingly, from fifteen to fifty ſhillings per acre.

Sometimes the nature of the ſurface admits the work to be done with a common plough, and ſometimes with a paring plough and horſes; and ſometimes, in particular circumſtances, it is performed with the breaſt plough, or paring ſpade. This laſt mode is thus accurately deſcribed in the Agricultural Report of the North Riding of Yorkſhire, by Mr Tuke junior: 'It is performed with a paring ſpade, which a man thruſts forward with his loins, and which cuts the ſods about one foot in breadth, and three feet in length. If the weather is ſo unſettled after paring, that the ſods do not dry when lying on the ground, women and children are employed to ſet them on edge, to expedite their drying; after which, they are put into heaps, about the ſize of a buſhel, and burnt.'

This ſimple and cheap mode of converting peat-moſs ſoils into arable and paſture lands, by paring and burning, hath been tried, in various parts of Scotland, with uniform ſucceſs. I think, of all the methods practiſed, it is the cheapeſt and beſt, and, as ſuch, moſt approved by thoſe enlightened on the ſubject.

Mr Rutherford, in his Letter to Sir John Sinclair, in the Appendix to the Survey of the Northern Counties, ſays—'The greateſt improvement, after draining boggy land, is, burning the ſurface; which operates a total alteration on the ſoil.'

In the Agricultural Report of Clydeſdale, Mr Naiſmith recommends draining moſſes, and then paring and burning their ſurface, and top-dreſſing it with ſand, gravel, or clay, which, he ſays, has been followed with ſucceſs in the Middle Ward of Clydeſdale; which county alone has forty-two thouſand acres of moſs ground.

It would be tedious, here, to go over every account of the ſucceſs of this method of reclaiming peat-moſſes, found in the late agricultural ſurveys of Great Britain and Ireland, and ſtatiſtical accounts of Scotland. But all thoſe accounts that I have found written with preciſion and accuracy, are put in the Appendix, together with ſuch others as I have derived notice of from perſonal information; for experience is every thing in agriculture.

Permit me, however, further to remark, that, both in England and Ireland, the ſame ideas as thoſe here ſtated are entertained reſpecting the improvement of moſſes, by the beſt informed

formed cultivators. In the ſtatiſtical Survey of Kilkenny, in 1802, by William Tighe Eſquire, there is a valuable communication of the experience of Mr St George on this ſubject, in which he adviſes farmers ſimply to drain their peat bogs, aſſuring them they will ſoon after ſerve for paſture; and to have patience, after draining, till they are conſolidated, before they attempt any further improvement; ever recollecting to keep a free paſſage for the water to go off. Thereafter he adds, bogs may be ploughed and burnt, and ſown with graſs ſeeds, by which good meadow graſs will be produced for fattening ſheep. After which, as a further improvement, they may be gravelled on the ſurface.

The Agricultural Report of Pembrokeſhire by Mr Haſſal, contains likewiſe the following notice. Mr Campbell of Stackpole-court has made ſuch an improvement on the bog of Caſtle-martin-Corſe, of ſeveral hundred acres, as muſt convince every obſerver what ground of this ſort is capable of. It is now drained, enclofed, and divided by ditches, moſt of which are planted with thriving willows. It has been improved by paring and burning. No agricultural improvement, Mr Haſſal adds, that he has been a witneſs to in the courſe of an extenſive and long experience, has ſucceeded better than this undertaking, the ſubject of which promiſes, in a few years, to become ſome of the moſt valuable land in the county.

The Communications to the Board of Agriculture, publiſhed in 1802, contain alſo ſome obſervations on paring and burning peat ſoil, by men of great knowledge in agriculture. Mr Cloſe, in his Eſſay, mentions an improvement on a peat ſoil by Sir Henry Peyton, where great crops were produced by paring and burning. He adds, no ſoils can pay better for paring and burning than theſe, as the operation of paring coſts very little, and it is a very efficacious dreſſing on the ſpot; and, the ſame ſoil continuing for ſome yards below the ſurface, it is an inexhauſtible fund of vegetable food.

In another Eſſay to that Board, the Reverend Arthur Young obſerves, that paring and burning, with a proper courſe of crops, is ſafe on any ſoil, and eſſentially neceſſary to ſome. Peat is the richeſt ſoil in the world, and therefore burning the moſt univerſally practiſed on it. 'Whatever variety of ſentiments there may be on this method (ſays he) for other ſoils, here there can be none. The univerſal practice, from the flat fens of Cambridgeſhire to the ſwelling bogs of Ireland, on the mountainous moors of the north of England, and on the rough ſedgy bottoms in almoſt every part of the kingdom, when freſh lands are broken up by men of real practice and obſervation, is,

is, to begin by paring and burning. Regiſtered experiments of doing it by fallowing, are to be met with in various works. The Board's Report of the North Riding of Yorkſhire and of Somerſetſhire, details ſome; others are to be found in Mr Young's tours; and the reſult is, either loſs, or a profit ſo very inferior, that the queſtion ought to be conſidered as done with. Let it ſleep for ever, except for the wrongheaded individuals, who will, upon every queſtion, ariſe, in every age, to contradict the common ſenſe of mankind.'

FOR THE FARMER'S MAGAZINE.

Original Letter from the late Sir James Stewart, Baronet, Author of a Treatiſe on Political Economy, to a Gentleman in Stirlingſhire, dated 14th October 1777. Communicated by Mr Erſkine of Mar.

I have the honour of your letter of the 11th, concerning the Corn Bill, but ſhall not enter upon the ſubject in this letter. I ſee you are well grounded in the ruling principle concerning importations. Corn is a manufacture, and greater than all other manufactures put together, both with reſpect to the number of the conſumers, and the number of the manufacturers. The inquiry you propoſe, for twenty-one years back, cannot be accompliſhed with exactneſs. The fiars will prove nothing, becauſe we have had no ſcarcity; and high prices are advantageous (ſay I) to cheap manufacturing. Cuſtomhouſe books in Scotland, will give no light, as Parliament found it, in forming a table, which I have, concerning the quantities exported and imported for ſome years preceding 1772. But the merits of the queſtion, concerning the effect of the prices of grain upon the proſperity of manufacture, muſt be examined, not from exportation, but from the rate of wages of manufacturers, compared with the fiars of the year. If the Glaſgow merchants can ſhew, from uncontroverted evidence, that wages keep pace with the prices of oat meal, riſing, and falling, as oat meal riſes, and falls, I give up my oppoſition to their plan: If they can ſhew that the wages of the great manufacturing claſſes, of weavers, ſpinners, &c. have come down theſe two laſt years in their own city and neighbourhood, in the ſame proportion, or nearly to it, as the price of oat meal has come down in this period, compared with the preceding years: If they can do this, I think their arguments are good; and if Parliament put the iſſue of the queſtion upon this fact, I am pretty ſure the merchants will not prevail; becauſe nothing but a riſe in the price of ſubſiſtence,

ſiſtence, ſuppoſing it to be moderate, ever engaged both farmers and manufacturers to become induſtrious. As long as merchants have profits on the ſale of manufactures, the manufacturer will ſhare their profits with them, were they to live upon the air; and it is in proportion to the high or low profits of the merchants, and not in proportion to the high or low price of the manufacturer's ſubſiſtence, that the wages of induſtrious labour riſe, or fall.

Theſe have long been, and ſtill are, my notions upon this ſubject. But I am ſick of repeating them; I am old and inactive; I have had converſations with the Glaſgow theoriſts; I have even written to them on this ſame ſubject, to no purpoſe. They hate the lairds of Clydeſdale, and do all they can to diſcourage the ſupply which their lands ſend them. There is no example of a Glaſgow merchant ever purchaſing one boll of meal in any market of the county. The reaſon is plain, they can make no monopoly of it, becauſe every farmer ſupplies the market in competition with them. They prefer to ſee their markets ſupplied from Ireland, or from diſtant countries, in the way of trade, to the other ſupply, from which they (the merchants) draw little profit. It is a certain fact, that the greateſt quantities of Iriſh meal, lately imported, has been conſumed by our tenants, who carry down their good meal for the conſumption of the manufacturers, who will eat nothing elſe, and bring back the bad Iriſh meal, for their own uſe. My aſſiſtance at the committee, will be of little uſe, as I know my opinions will have little weight; they have long been printed, little read, and leſs conſidered. We have a committee as you have, of which I am one. I hear you have written upon the ſubject; ſo Mr Lockhart, Cambuſnethan, told me; but Smith has printed in favour of free importation. Let the merchants adopt his ideas, as you obſerve, and the landed intereſt may follow: but I think, if ſuch a ſcheme would ruin the manufacturer, it muſt equally ruin agriculture.

TO THE CONDUCTOR OF THE FARMER'S MAGAZINE.

Thoughts on Flax Huſbandry.

SIR,

HAVING been a conſtant reader of your Publication, from its commencement, and highly gratified with the extenſive ſtock of ſterling information therein contained, permit me to offer a hint, ſuch

ſuch as occurs to me, on the ſubject of extending the growth of flax.

There is not a doubt, that as luxuriant and productive crops of flax may be raiſed in many parts of Scotland, as perhaps in any other country; and though the encouragement held out by the Honourable Board of Truſtees may be tempting to many, yet adverſe circumſtances, of different kinds, deter the generality of farmers, and chiefly the greateſt and moſt intelligent ones, from embarking in the trade; ſuch as, that notwithſtanding it is deemed the moſt robbing crop that grows, there is no return from it to the dunghill; the operations of weeding, pulling, watering, graſing, &c. interferes ſo much with hay and corn harveſt, turnip work, preparing land for wheat, &c.; beſides the unſkilfulneſs of moſt farmers in the proceſs of watering or ſteeping, is enough to deter them from it; not to mention the total want of proper watering places in many ſituations, with the general abuſes at lint mills, where a farmer cannot give attendance, and where the workmen are not only unſkilful, but ſhamefully careleſs, often allowing half of the lint to be knocked away with the ſkutchers, and cleaning the remainder very improperly. As a remedy for theſe abuſes and inconveniences, allow me to ſuggeſt, that if the trade was in the hands of a ſet of opulent and ſkilful men, who have made it their ſtudy to underſtand every part of the management of lint in all its ſtages, and who would purchaſe it from the farmers when ready for pulling, ſo as they may have no further trouble, unleſs perhaps aſſiſting with the carriage of it to the watering place, to the ſpreading field, and to the mill: In this way, the trade might flouriſh, as ſuch people would be able to afford the farmer a price that would make it worth his while to raiſe flax, and have a handſome profit to themſelves. We may naturally ſuppoſe, that theſe lint boors, as they are called in Holland, when properly eſtabliſhed, will provide themſelves with every requiſite for carrying on their buſineſs; ſuch as, lint-mills (perhaps on an improved plan) in their own poſſeſſion, with proper hands for working them, under their own eye; alſo proper watering-places, upon a large ſcale, detached from running waters or lakes, where the ſteeping of lint is a nuiſance, and does miſchief, by poiſoning the fiſh, cattle, or horſes, and hurting the health of the people, who are obliged, in many places, to uſe theſe running waters, for want of ſprings, though at ſome miles below where it is ſteeped. A lint boor, who carries on an extenſive trade, can much better afford to have all theſe conveniences in a proper ſtyle, than a farmer can, to whom it is but a ſecondary object; while, on the other hand, as it would be the ſole trade of the former, he can ſee juſtice done,

done, in every reſpect, to the article, in all its ſtages, from the growing field to the heckle; and by his conſtant attention, and ſuperior knowledge in the proper mode of managing it; by ſkilful and attentive management, and completely checking all depredation, it may be preſumed, that the crop will be at leaſt one third more productive, and perhaps of a better quality, than commonly happens.

Was a flax huſbandry eſtabliſhed upon theſe principles, I have no doubt but that, in a few years, as much of the article might be raiſed in Scotland as would ſupply the whole of our linen manufacture, and, of courſe, an immenſe ſum retained at home, that is now annually ſent abroad for purchaſing what the trade requires. To farmers, it would become a profitable concern, ſeeing that a good rent could be paid, while the trouble would be confined merely to ploughing and harrowing the ground, as is done for a corn crop. Their attention would not be taken from the ordinary line of buſineſs, or engroſſed by the multifarious proceſſes neceſſary before flax can be brought to perfection. It is by this diviſion of labour, that the trade can be made to flouriſh; and I would as ſoon expect that a farmer would thrive, who grinded his wheat into flour, and baked that flour into bread, as that the grower of flax could ſucceed, when he attempts to execute all the after operations.

If the above is deemed worthy of a place, and can have any tendency to promote a more general growth of flax, I will conſider myſelf amply rewarded for ſuggeſting it.

I earneſtly wiſh every ſucceſs to your Magazine, or, which is the ſame thing, to the improvement of the country. I remain, &c.

J. M

TO THE CONDUCTOR OF THE FARMER'S MAGAZINE.

Obſervations on the Diſeaſe of Sheep, for which Inoculation has been practiſed on the Continent, &c.

SIR,

IN the review of Lawrence on Horſes, No. XV. p. 331., your printer has fallen into a whimſical blunder, having ſubſtituted *ſaccharine* for ſocotrine aloes; and thereby converted the bittereſt article of the Materia Medica into the ſweeteſt.

Your correſpondent R. K., No. XV. p. 297., appears to have miſtaken the diſeaſe for which inoculation of ſheep has been practiſed on the Continent. About ten years ago, at the deſire of Sir John Sinclair, I tranſlated from the French, a treatiſe on the Management of Sheep in the South of France, and the diſeaſes to

to which they are ſubject. I think it was a paper in the Tranſactions of the Agricultural Society of Paris. I clearly remember two eruptive diſorders of ſheep mentioned in that treatiſe: *La galle*, literally the itch, our ſcab; and *La verole*, which may be tranſlated the ſheep-pox, and which is the diſeaſe for which inoculation has been ſucceſsfully employed.

This laſt diſeaſe, like the ſmall-pox among mankind, is deſcribed as epidemic, or contagious; in particular ſeaſons exceſſively infectious; and very mortal, when acquired in the natural way by contagion: while, on the other hand, it is very mild, when produced by inoculation. It reſembles the ſmallpox in its boils or puſtules, in the regularity of its progreſs, and in the circumſtance of never attacking the ſame individual twice. A female agriculturiſt, or ſtore-miſtreſs, is mentioned as having firſt introduced the practice of inoculation.

The above is the beſt account I can give of this ſubject, from a ten years recollection at leaſt. As the treatiſe is not long, and contains many curious particulars reſpecting the management of ſheep in the Pyrenean mountains, I dare ſay the worthy Baronet will readily communicate it to you for the Magazine, if it has not fallen aſide.

I by no means think myſelf competent to enter the liſts with your Noble correſpondent in laſt number, on the ſubject of working oxen. But I cannot conceive how the numerous and highly experienced farmers *on both ſides of Tweed*, ſhould have univerſally given up the uſe of oxen for draught, which they all formerly employed, unleſs from thorough and practical conviction, that *horſes are more profitable* for farm labour.

I laſt year drained about two acres of a field, in the Eſſex way, which was wet from a retentive bottom; and the operation has been perfectly ſucceſsful. The drains run lengthways, every fifteen feet, communicating at each end with a croſs drain, inſide of the head-land; and from this laſt, are ſeveral lateral communications into the fence ditch, wherever the dip was favourable. The material uſed was ſtones, covered firſt with ſtraw, and as near the ſurface as poſſible, as the field is not meant to be taken out of graſs again. I am thoroughly ſatisfied there are large tracts of coarſe land in the Merſe, that would be very highly benefited by this mode of draining; as the rotteneſt hole that ever exiſted, if only ſuſceptible of the operation, and that judiciouſly performed, will be thereby rendered as ſound ſheep paſture as any in the kingdom. I am, &c.

R. r.

TO THE CONDUCTOR OF THE FARMER'S MAGAZINE.

Observations on Sheep.

SIR,

IN your last Number 'A Cheviot breeder' says, that repeated experiments have completely established the superiority of the Cheviot breed of sheep, over the Forest and all other kinds in highland situations; that they attain early maturity, and that if any advocate of the contrary opinion wishes to have a public proof, there are breeders of the Cheviot sheep, who, when called on, will not shrink from making the trial. In the same Number, another Correspondent maintains, that it is absolutely certain, the Cheviot neither will, nor can feed on such coarse pasture as the Forest breed; that they are indolent, luxurious and tender; and that from fair and complete trials and daily observations, he is convinced, that on cold and stormy farms, the latter will attain the greatest weight, &c. And 'A breeder of the coalheaver's mutton,' (who, if I am not much mistaken, is well acquainted with all the breeds of sheep in Great Britain), says, that he has long thought the Forest a most valuable breed, and confessedly best calculated to withstand the severity of the cold upon high heathy mountains, where no other sheep he is acquainted with can subsist. I am now considerably concerned in breeding and feeding, and anxious to obtain information from men of experience; but, with such discordant opinions and statements before me, am unable to determine which is the most profitable kind of sheep. The breeding and management of live stock, is certainly of great importance, not only to the occupiers and proprietors of land, but the community at large; and as nothing is so convincing as the results of accurate and properly conducted experiments, it will be highly gratifying to me, and, I presume, advantageous to the public, if the above correspondents, or any other able and impartial breeders, will be so obliging as to communicate, through the medium of your Magazine, *a full and particular* account of experiments, instituted with a view of ascertaining the merits of the different breeds of sheep, together with their results. It is contended *by many* breeders, that the Cheviot are as hardy and healthy, on stormy mountainous heathy pastures, *from the time they are lambed, till that of their being drafted for fattening*, as the Forest sheep; that their weight and propensity to fatten are greater; and that these pastures will support as many, or very nearly as many, sheep of the one kind as the other. If their arguments are well founded, it seems to follow, that the Cheviot is the most valuable kind, their fleeces being worth 3s. to 4s. 3d.; whereas, those of the Forest breed are

not

not worth more than 1s. 6d. to 1s. 8d. each. Indeed, if their ſtatement is admitted, and if their breed of ſheep (the Cheviot) were to ſupplant the Foreſt (black-faced, hairy-wooled breed) on all our Highland paſtures, the advantages which would reſult to the kingdom, from the increaſed value of manufactures in their ſeveral ramifications, would be immenſe. The truth of theſe ſtatements, however, the advocates of the Foreſt breed will by no means admit; and if *their* arguments, namely, that the Cheviot ſheep are too delicate and indolent for moſt of our Highland paſtures, be well founded, I think the black-faced kind ſhould, in certain very high and ſtormy ſituations, be preferred. For it ſtrikes me forcibly, that the beſt courſe for a farmer to purſue, is not to lay much ſtreſs on the fineneſs of his wool, or the deliciouſneſs of his mutton, (conceding nothing to the epicure, but what promotes his own intereſt), but to keep that kind of ſheep, which will, *for fleece and carcaſe*, leave him the greateſt profit on an average of years; or that will convert the produce of his paſtures, or a given quantity of food, into the moſt money in a given time. This converſion is, I humbly conceive, the criterion of excellence in ſheep and cattle. It is a principle, however, which ſeems to have been departed from in the experiment at Edgerſtone, (ſee page 525, vol. 3. of your Magazine), where the food was not weighed, and where the lean and voracious Highlanders would, perhaps, conſume more graſs than the Leiceſter ſheep, which, I underſtand, were as fat as a 'ſeal or Hampſhire hog' at the commencement of the experiment, *for which the wedders were choſen at two years old*: ſo that the valuable property of attaining *early* maturity, for which the latter kind of ſheep are ſo much diſtinguiſhed, was totally diſregarded. Beſides, Sir, when ſo much importance was to be attached to the proportional increaſe of weight, was it fair to try very fat againſt lean or half-fat ſheep? In the experiments of Mr Billingſley, (which I underſtand are inſerted in the 7th vol. of the Bath papers, and which are ſaid to have been conducted with accuracy and impartiality), the food was regularly weighed; but, having been taught to believe in the doctrines of the celebrated Mr Bakewell and his diſciples, particularly that 'the new Leiceſter ſheep are the beſt machines for converting turnips and other rich food into money,' I was much ſurpriſed and diſappointed, on being informed, that the reſults of theſe experiments were more favourable to the South-down, Cotſwold, and Mendip, than to the Leiceſter ſheep. Theſe reſults have made many converts, ſilenced ſome noiſy advocates for the latter kind of ſheep, and cauſed others to *waver* a little, in ſeveral parts of the country. It therefore ſeems incumbent on ſome of the followers of Bakewell and

Culley, *who are able to contend with Mr Billingſley*, minutely to inveſtigate and controvert the accounts of thoſe trials which have proved ſo injurious to their favourite breed. That ſome of them may do ſo, and communicate their remarks to you for publication, is the wiſh of Yours, &c.

PASTOR JUNIOR.

May 14. 1803.

TO THE CONDUCTOR OF THE FARMER'S MAGAZINE.

On the Nature and Management of the Short Sheep; with Remarks on the difference between them and the Cheviot breed.

LETTER II.

SIR,

IN my laſt, I took a comparative view of the *Cheviot* and *Foreſt* breeds of ſheep; deſcribed the nature and properties of each, and adduced a few arguments, tending to ſhew that the latter alone is adapted to high and wet ſituations; and that all attempts to rear the former upon expoſed Highland farms, will be found improper, and, in the event, attended with diſappointment and loſs. Allow me now a few words more, in addition to, and in ſupport of, what I then advanced.

Farmers in Highland diſtricts have learned, from experience, to lay their account with three or four months of ſtormy and inclement weather every year, and often with ſuch falls of ſnow as render the higher grounds inacceſſible, and confine the whole flocks to the low paſtures, which thereby become foul and unwholeſome. No ſooner, however, does a thaw take place, and the brows of the hills begin to appear, than the Short or Foreſt ſheep (like Milton's Death and Sin, that ſnuffed the change on earth) ſets out, regardleſs of the driving fleets that yet deform the *day delightleſs*, aſcends the higher grounds, and aſſiduouſly gathers the green and juicy plants, ſuch as ling, moſs, heath, &c. which have preſerved their verdure through the ſevere ſeaſon. Theſe ſoon reviviſy the ſpirits, brace the ſyſtem with new vigour, and prepare the ewe for the fatigues of bringing forth her lamb, and the ſtill more ſearching duties of a nurſe. The Cheviot ſheep, on the contrary, whoſe conſtitutional indolence is increaſed by long confinement to the low paſtures, cannot be compelled to take to the higher grounds, but continues to creep about the bottoms and ſkirts of the hills, where vegetation ſcarcely exiſts, and where any food, that can be obtained, is truly unwholeſome,

and

and ſuch as tends only to waſte and debilitate the ſpirits. The conſequence is, that inſtead of regaining ſtrength, ſhe becomes daily weaker and weaker, and often falls a victim at the lambing ſeaſon *.

But the propriety of rearing the Foreſt breed in preference to the Cheviot kind, upon Highland farms, will ſtill more appear, if we take into account the different degrees of danger to which the new dropt lambs are expoſed. In this reſpect, the moſt ſtrenuous advocates for the Cheviot breed, ſeem diſpoſed to acknowledge their inferiority. Indeed, it is not to be expected, that a weak, enfeebled, and diſeaſed ewe, can produce a ſtrong and healthy lamb; and when theſe puny productions happen to be uſhered into light, during ſtormy weather, they muſt inevitably periſh, as they are for the moſt part deſtitute of wool, eſpecially on the back and ſhoulders, to defend them from the pitileſs rains and ſleets which generally prevail about that period. No doubt, the lambs of the other breed, are equally expoſed to the inclemency of the weather; but then, being the offspring of healthy and hardy parents, and being well clothed with wool, even in the ſhorteſt places, from $\frac{3}{4}$ to $\frac{5}{4}$ inch in length, they are better able to reſiſt the fury of the ſtorm. Beſides, being naturally lively, and endued with much animation, they ſoon get upon their legs; while the Cheviot lambs, weak and enfeebled, continue to lye upon the cold earth, where numbers of them periſh in leſs than twenty minutes from their birth. The very form and make of the latter kind, operate powerfully againſt them at this critical time. The legs being long, the body heavy, ſupple and unmanageable, it is with much difficulty, and after many fruitleſs attempts, that they at laſt get upon their feet. When the day happens to be mild, lambs of both kinds may do well; but a continuation of ſuch days is not to be reckoned upon. The alternation of froſt and freſh, is extremely rapid, about the lambing ſeaſon, in ſuch climates as I am ſpeaking of;

* We may here notice the difference between ſheep that mend their conſtitution upon the high parts of the paſture, and thoſe who do it upon the low grounds only. As ſoon as the hills are clear of ſnow, the former begin to advance; but the latter make no progreſs before the new graſs comes, which is generally late. In the mean time, the ewes become more feeble and weak, as they advance in a pregnant ſtate; and, if graſs becomes plentiful all of a ſudden, they are apt to be attacked by a diarrhæa. They are not indeed liable to this diſeaſe, to the extent that *eild* ſheep are: yet it may, and often does affect them, ſo much, as to cauſe the wool fall gradually from the ſkin, whereby the animal is prematurely expoſed to ſevere cold, and the meliorating of its condition much retarded.

and it is no uncommon caſe, to ſee the mountains covered with ſnow, twice in twenty-four hours; and as often bared by ſtormy winds and daſhing rains. Theſe ſudden, and ſevere changes of weather, materially affect and injure, even the hardieſt race of ſheep; and ſurely, when this is the caſe, all attempts to rear a breed of a more delicate nature, in wet and expoſed ſituations, muſt be conſidered as highly improper, and eventually unprofitable to the farmer.

There is another diſadvantage, peculiar to the Cheviot breed, and which is very prejudicial to the intereſt of the lamb; I mean the dilatory way in which the ewe gives her milk. All ewe-milkers (at leaſt thoſe whom I have had an opportunity of conſulting), who have for ſeaſons milked both kinds, agree in this point; and it is known by experience, that a weakly lamb will live, and even thrive upon a ſhort ewe; but, if attached to a long one, will either die immediately, or, at the beſt, but waſte and pine away gradually. I ſhall only add, what is known by experience to every ſtoremaſter who has tried both kinds upon high-lying farms, that, taking an average of years, one third more *eild* ewes will be found among the Cheviot than the Foreſt breed, which is no trivial conſideration *.

Farmers, who enjoy dry ſoils and warm expoſures, may perhaps be inclined to think, that I ſpeak from prejudice to the one kind, and an overweening fondneſs and partiality for the other; but I can aſſure them that I am not actuated by ſuch ideas. What I advance is the reſult of long experience; and the only end I have in view, by publiſhing it, is to prevent farmers, who may enter upon Highland ſituations without a proper knowledge of the dangers and difficulties attending them, from engaging in ſchemes that will be found unprofitable to themſelves and the community at large.

Having, in my former letter, deſcribed the properties eſſential to the true Foreſt breed, I ſhall now lay down a few rules for raiſing a ſtock of that deſcription. If the farm has a large proportion

* Perhaps the beſt way for ſaving the lives of the Cheviot lambs, in a courſe of tempeſtuous weather, is, to build houſes in the moſt centrical places of the farm, with a fold attached to each. When a ſtormy day happens, the ſhepherd and his aſſiſtants (and the more he has, on ſuch occaſions, the better) ſhould collect as many of the new-dropt lambs as they can, and carry them through the folds into the houſes. The mothers, from cuſtom, will enter the folds without heſitation, and, when there, will eaſily be got into the houſes. This plan, has been tried on ſome farms, and found to anſwer well, as the ewes ſuffer nothing from a ſhort confinement, and the lambs are ſure to be ſaved.

portion of heath, it will be moſt properly employed in raiſing wedder ſheep for the Engliſh paſtures; for this valuable ſhrub, purifies and refines the carcaſe, as it advances in ſtrength and bulk, and thereby prepares it for an after feeding. Where a department of the farm is high and cold, and will not paſture ewes to advantage, it ought to be aſſigned to the breeding of dinmonts; but where the paſture is acceſſible to ewes through the moſt of the ſeaſon, they ought to have the preference, as being the moſt profitable ſtock. Hogs are alſo advantageous, when they can be brought through the winter without the ravages of any annual diſtemper; but where they are in a broken, unequal, and conſequently *unfattable* ſtate, dinmonting them becomes neceſſary, as this brings them to a nearer uniformity, and generally to a tolerably good condition.

The lambs undergo caſtration, when between ſix and ſeven weeks old. This operation checks the general ſpread of the ſyſtem; gives a dwarfiſh and effeminate caſt to the countenance, and puts a ſtop to the growth of the horn; therefore, if other circumſtances would allow, the delaying it for a fortnight longer would be highly beneficial.* As hot weather may, however, now be expected, as the ſeminal chord and its collateral blood-veſſels rapidly increaſe in ſtrength, and their various connexions become more entwiſted; this delay, how advantageous ſoever in other reſpects, might be attended with conſiderable danger; and therefore, after all, I am inclined to think, that caſtration ſhould continue to be performed at the uſual time. As to the operation itſelf, it ought to be performed with all poſſible tenderneſs, and the lambs, immediately after, carefully conducted to their dams.† After caſtration, the carcaſe rapidly encreaſes in

* It is ſomewhat ſtrange, that caſtration ſhould have ſuch oppoſite effects on the bull and the ram, by increaſing the growth of the horn in the former, and diminiſhing it in the latter. Doubtleſs, a proper inveſtigation of the cauſe, would lead to a clearer and juſter knowledge of both animals, than is yet obtained of either.

† When the lambs are caſtrate, a general inquiſition takes place, and there are always ſome diſcovered, which have the exterior marks of rams, but in reality are not. One kind, are called *Riglands*, having one ſtone in the ſcrotum, and another in the back, a little behind the kidneys. They are generally well made, and therefore, ſome ſtoremaſters keep them for the uſe of the ewes; a practice, that ought to be diſcontinued, as it is ſure of introducing a great number of the ſame kind into the ſtock. Taking away the ſtone from the ſcrotum, diſqualifies them from impregnating the females, but does not leſſen their ardour for coition, which inevitably reduces them once in the ſeaſon.

The

fatneſs; and the interſtices, between the ribs and the fleſhy parts, begin to be tolerably well clothed. The wool alſo turns ſofter; and the bleat, loſing its hoarſe, unequal tone, aſſumes one more continued and uniform.

The *ſpaining* ſeaſon commences from the 15th to the 10th July. By this time, lambs have acquired as much ſtrength, experience and ingenuity, as to ſearch for, chooſe, and eat what is proper and nutritive; and the menſtruum of the ſtomach has become ſufficiently ſtrong to digeſt and tranſmute, for the nouriſhment of the body, all the varieties of graſs, herbs, &c. that are lodged therein. It is not to be wondered at, if the inquietude and perturbation of ſpirit, occaſioned by their being taken from their mothers; the ſtate of alarm and terror they feel themſelves in, on being deprived of their guardians and protectors, and the painful and arbitrary diſtinctions of mark, buſt, &c. impoſed upon them, ſhould, for a few days, take their attention in a great meaſure from their food, and conſequently interrupt their progreſſive advance: But when once theſe tender emotions are effaced, and they begin to feel the neceſſity of exerting themſelves for food, then they recommence thriving, which continues, (diſeaſe apart), till ſnows, bitter-biting froſt, and pinching hunger, in the following winter, reduce them to a ſtate of weakneſs and imbecility, ſometimes ſo great indeed, that life itſelf is in danger. I am, yours, &c.

A. S. L.

TO THE CONDUCTOR OF THE FARMER'S MAGAZINE.

Remonſtrance of the Newcaſtle Coalheavers.

SIR,

IT was only the other day, that I accidentally took up a Number of the Farmer's Magazine, in which I met with a diſquiſition upon ſheep-farming by Epicurus. Of the general merit of the paper, a man of my profeſſion muſt be an incompetent judge; but there is a paſſage in it, which particularly attracted my

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The other kind, is provincially called *Chacers*; perhaps, from their chacing and ſtriving to copulate with the ewes in rutting time. As they eject no ſemen, their efforts to impregnate the females, is ineffectual. They carry two ſtones in their back, where the Rigland has but one. Their horns, bend not like thoſe of the true males, and they grow wider and thinner at the root. Their face, has alſo a more effeminate look. Both kinds are remarkably hardy.

my notice, where he ſays, that the fat mutton, the breed of which he ſo ſtrongly reprobates, is only fit 'to glide down the throat of a *Newcaſtle Coalheaver.*'

Forcibly ſtruck with the dangerous conſequences which this might produce, by ſpreading an idea, that any mutton, however groſs and rank, would find a ready market among my ſable brethren, I indignantly put the Magazine in my pocket, and deſcended to the bowels of the earth, to communicate what I had ſeen. No ſooner had I read the odious paſſage, than the whole ſubterraneous regions were in an uproar. An old heaver, who was well known to delight in a mutton chop, inſtantly propoſed, that, armed with ſhovels and pick-axes, we ſhould ſally forth, and ſwear vengeance and deſtruction againſt the man who dared to promulgate ſuch a doctrine. Another ſuggeſted, that a ſelect few ſhould be diſpatched, to bring the culprit, bound hand and foot, to our dark abodes; and there, by groſs feeding, convince him of its dangerous tendency to people of our ſedentary habits. In ſhort, the ruin of Epicurus ſeemed inevitable, had not ſome one, more cunning than the reſt, hinted, that there might be ſome difficulty in diſcovering where he was to be found. This puzzled us a good deal. Some thought he muſt be an Eaſt-Lothian farmer; but, none of us had heard of any family there of that outlandiſh name. Others conjectured, with great ſeeming probability, that it muſt be the Greek or Latin name for an *Epicure.* But I, from the circumſtance of my father having been a ſchool-maſter, remembered to have heard of ſome heathen philoſopher of that name; and ſuppoſing, that arguments would have more weight with a gentleman of that deſcription, than violent meaſures, propoſed that a calm remonſtrance ſhould, in the firſt place, be written him, through the medium of your Magazine, before proceeding to extremities; requeſting him ſeriouſly to reconſider the ſubject, and to take ſome effectual meaſures for doing away the evil likely to be occaſioned by his eſſay. This was unanimouſly approved of, and I was appointed to convey the ſentiments of the meeting to you.

I have, therefore, Mr Editor, to beg you will inſert this in your next Publication; and I would fain hope, that Epicurus will be brought to be of opinion that the farmers who raiſe this abuſed breed of ſheep, muſt find ſome other channel for them to glide in, than the throat of

A NEWCASTLE COALHEAVER.

Newcaſtle-upon-Tyne, 25th Aug. 1803.

TO THE CONDUCTOR OF THE FARMER'S MAGAZINE.

Recipe for the Diſeaſe called Red-Water.

SIR,

Obſerving in your publication (No. XII.) for November laſt, a recipe to cure the bloody urine in horned cattle, I take the liberty of communicating one that has been ſucceſsfully uſed during the long practice of a noted cow doctor, now dead, communicated to me by his ſon, a clergyman; and which, for upwards of twenty years, I have not known to fail in one ſingle inſtance. Yours, &c.

24. *Jan.* 1803. K.

To cure the Bloody Urine, commonly called Red-Water.

For a cow, take four ounces of oil of turpentine, and one ounce of bole armenic, powdered, given cold in one quart of blue milk; afterwards rinſe the horn and bowl the ingredients were mixed in, with one quart of ſpring water, and adminiſter to the beaſt; then let her faſt two hours, when ſhe may be turned out to eat and drink as ſhe pleaſes. If ſhe is coſtive, give half an ounce of julap in an Engliſh quart meaſure of new ale, with half a pound of treacle, pretty warm.

N. B. For an ox five ounces of the above, a bull ſix ounces: but theſe doſes are too ſtrong for any beaſt under two years.

TO THE CONDUCTOR OF THE FARMER'S MAGAZINE,

The BARON MUNCHAUSEN, *greeting!*

SIR,

As my *adventures* have long been in the poſſeſſion of the public, my name and character cannot be unknown to you.

Marked as I have been by my deſtiny for an extraordinary perſonage, the events of my life have run in a courſe widely differing from that of ordinary occurrences; nature hath manifeſted herſelf to me, under forms inacceſſible to uſual experience; nor would it be proper that the generality of mankind ſhould found upon every experience of ſuch a ſingular perſonage as myſelf, as a ground of expectation of ſimilar reſults in ſimilar circumſtances. *Cherryſtones*, for inſtance, *fired by me, from a muſket, into the ſkin of a live deer, and producing, in due ſeaſon, a crop of cherrytrees, upon the*

the living deer's back: * This, I ſhould conſider as one of thoſe ſingular kind of manifeſtations, reſerved excluſively to myſelf; nor would I, by any means, inculcate a correſponding practice, as a feaſible improvement in the art of raiſing fruit-trees.

Even to myſelf, the extraordinary phænomena, witneſſed, have not always appeared uniform and conſiſtent, as may be ſeen at large, in the book of my adventures.

I would, by no means, propoſe my experiences as a rule of practice, excepting in caſes, *where not only the reſults have, to myſelf, proved always the ſame upon repetition; but where, alſo, my reſults are ſupported by the general analogy of the uſual courſe of nature.*

Under theſe limitations, I ſhall lay before you a few of my experiments, which I conceive may conduce to utility in regard to agricultural economics. Like other great inventors, I find I am in conſtant danger of being robbed of my due fame by plagiariſts; and it is probable, that in the courſe of correſpondence, I may vindicate to myſelf, many experiments pretended to have been made by various correſpondents of yours; but which, in fact, never were made, but by me the Baron Munchauſen.

I. *Talicotian Experiment.*

All your readers who have read Hudibras, muſt be acquainted with the experiment, upon which is founded the celebrity of Talicotius.

The learned Talicotius, from
The brawny part of porter's bum,
Cut ſupplemental noſes, which
Laſted the date of parent breach;
But, when the date of knock was out,
Off drop't the ſupplemental ſnout.

That

* Leſt ſuch of our readers as may not have heard of Baron Munchauſen, ſhould be apt to conjecture that we have obtained a correſpondent from the lunar regions, we think it proper to obſerve, that about twelve or thirteen years ago, a book was publiſhed under the title of the Travels of Baron Munchauſen, evidently intended to ridicule thoſe ſtories of wonder, which travellers in diſtant and unknown countries, often attempt to palm upon their readers; the Baron's wonders are ſo ſuperlative in magnitude, as to make every thing elſe of the kind appear like pigmies. We apprehend the intention of our preſent correſpondent is of the ſame nature, that is, to ridicule wonders in farming, and that abuſe of analogical reaſoning, from which wonderful concluſions are often ſpecioufly inferred, or aſſerted directly as facts, though not warranted by the fair verification of actual experiment. But the Baron ſhall be allowed to ſpeak for himſelf. N.

That the art of thus forming artificial noſes, (however ludicrouſly repreſented, after his own manner, by Butler), was, in fact, ſucceſsfully practiſed by Tagliacotti, we are aſſured by Ferrier, the learned detector of the plagiariſms of Sterne. Taking therefore the fact for granted, I began to conſider to what uſes the experiment of Tagliacotti might be applied, farther, than merely the redreſſing of noſes, curtailed by the great pox. One difficulty indeed preſented itſelf, as to the extenſion of the experiment; which was the entire ſympathy ſuppoſed to ſubſiſt betwixt the graft and the original ſtock from which it was taken, notwithſtanding of this total diſſeveration to the eye of ſenſe:—

But, when the date of knock was out,
Off drop't the ſupplemental ſnout.

Did this ſympathy in fact ſubſiſt; then the application of the principle might, eventually, prove but temporary in its effects. But, on farther reflection, I was convinced the exiſtence of the ſympathy was a mere arbitrary ſuppoſition; in fact, a mere vulgar prejudice, ſimilar to that of the ſympathy ſuppoſed ſubſiſting betwixt the wound, and the ſword that inflicted it; which in the chirurgical practice of theſe times, cauſed the application of medicine to be made ſolely to the inſtrument; probably, indeed, to the no little advantage of the wound; which was thus left to heal according to the firſt intention, through the *vis medicatrix naturæ*.—Very poſſibly Tagliacotti himſelf, as a man of humanity, might have originally invented and been careful to inſtil this prejudice of the ſympathy, that the rich patient might ever after continue anxious to provide for the comfort of the poor perſon who had imparted from his breech, the materials for refitting the other's noſe; and indeed, it would conſtitute a moſt efficient bond of ſocial union, were the noſe of the rich, ever and univerſally, thus to feel in uniſon with the breech of the poor.

Having thus ſatisfied myſelf, that the ſympathy alleged by Butler, was a mere gratuitous ſuppoſition, which needed not give me any uneaſineſs in the proſecution of my experiments; I next turned my attention to the general analogy of nature, to diſcover how far *it* tended to overthrow or confirm the probability *of the concretion and homogenization of diſſimilar or different parts of the ſame ſpecies, or of different ſpecies of animals, thus artificially conjoined, according to the practice of Tagliacotti.* In animals, I could find few facts, upon the analogy of which, I could lay hold; unleſs, indeed, the two-bodied children, preſerved in the muſeums of the curious, or the cows with two heads exhibited at country fairs, might be conſtrued into analogous facts.

To

To ſay truth, there is a ſort of reſtiveneſs in animals, both rational and irrational, againſt yielding themſelves up quietly to become the ſubjects of philoſophical experiment, which unhappily retards the advancement of the ſciences. Would you believe me Sir, when I aſſure you, upon *my veracity*, that, in all your Scots metropolis, I could not find a ſingle noſeleſs wh-re, nor a porter, who would ſubmit to the Talicotian experime ; although I promiſed to the one, a noſe of the moſt perfect antique Grecian *coſtume*, *gratis*; and to the other, an indemnification, amounting to ten times more than his whole breach was worth!

Deſpairing, thus, of finding ſuitable analogies in the animal kingdom, I turned my attention next to that of vegetables, a much more quiet and pacific ſubject of experiment. Neither let it be thought that the analogy betwixt the two, is any way obſcure or diſtant. For what, pray, is an animal, but a vegetable, carrying its roots incloſed within its own body; and voluntarily ſupplying theſe roots with the proper ſubſtance of its nutrition, by ingeſtion? and what is a vegetable, but an animal, with its roots fixed in the ſoil, whence it is nouriſhed; and thence, as I ſuppoſe, deprived of the power of locomotion? From the one to the other, of ſubjects ſo ſimilar, the inferences of analogy can never be conſidered as ſtrained. Here then, in the varied inſtances of *budding*, *grafting*, *inoculating*, *inarching*, I found the moſt incontrovertible confirmation of the principles of the Talicotian practice. Here I was preſented with innumerable ſpecimens of the union and homogenization of the parts of *ſpecies* the moſt diſſimilar; with the moſt wonderful mutual intercommunion of properties the moſt different.

Fortified by ſo many ſtrong analogies, I forthwith proceeded to the extenſion of the Talicotian practice, to the purpoſes of rural economics.

But, here, methinks I hear you or your readers exclaim, *why this long preamble? why not come at once to the point?* Let me, however, obſerve, once for all, that ſuch interruptions only beſpeak ill-breeding. Important experiments, like important perſonages in ſociety, cannot properly be introduced to company, without a ſuitable preſatory ceremonial.

At the time I was about to inſtitute my experiments, your wiſeſt political economiſts had determined that the proſperity, if not the very ſalvation of your Britiſh Iſland depended upon the extenſion of the growth of fine wool; whilſt others ſeemed, as ſagely, to be of opinion, that, if all your flocks of ſheep were converted into the bearers of fine clothing wool, you ſhould not have an ounce of coarſe wool for a ſingle rag of blanketing or petticoat. I therefore conſidered that the views

of

of each might be ſatisfied, and their mutual objections ſilenced, if only a ſufficiency of each kind of wool-bearing animals could be made to ſubſiſt on your lands, to furniſh ſuch abundance of each kind of wool, as ſhould ſatisfy the demands of their reſpective patrons. But, as your lands fit for the purpoſe, are already pretty ſufficiently ſtocked with ſheep—excepting, indeed, your Engliſh commons, which I underſtand to be kept ſacred for geeſe, in commemoration of their having once ſaved the capitol of Rome—the difficulty recurred as to the poſſibility of multiplying the quantity of wool-bearers. A thought once occurred, of ſubſtituting the Llamas, or ſheep of Peru, for your uſual beaſts of burden: this, however, ſoon gave way to to a ſuperior project, ſince followed up in practice; which was, the contrivance of making your horſes bear a crop of wool, inſtead of hair, upon their ſkins.

For this purpoſe, I cauſed a foot ſquare of ſkin, to be neatly flayed from off one of my horſes; which was inſtantly replaced by an equal portion of ſkin, warm from a ſheep's back; the ſeams were connected by proper ſutures, and the whole covered with a ſuitable plaſter. And I found, at the end of nine weeks, that the old and ſupplemental ſkins had become perfectly continuous, and equally adherent to the fleſh below.

Being ſomewhat cautious, in an experiment entirely new, however much juſtified by the analogy of nature, I durſt not venture upon a continuation of the proceſs, till after the lapſe of conſiderable intervals of time: Suffice it to ſay, that in the ſpace of two years, by repeating the operation, I ſucceeded in clothing my horſe in ſheep ſkin, completely from head to foot. I afterwards, killed my horſe, in order to aſcertain the effect of the action and reaction of the ſheep-ſkin on the horſe carcaſe, and of the carcaſe upon the ſkin, in producing a mutual intercommunication of their reſpective properties. As, belike, few of your readers have, like myſelf, had the opportunity of regaling upon horſe fleſh, with the Tartars, it would be impoſſible for me, to convey to them any diſtinct conception of the peculiar reliſh of my horſe-mutton; I ſhall only ſay, that I believe it ſuch as would prove exquiſitely agreeable to moſt palates. The pellet approaches moſt to the nature of horſe hide; only, I believe, to make good tanned leather of it, it might require a liquor of a ſomewhat ſtronger impregnation of tar. The wool, I found to be of the coarſer kind, approaching ſomewhat to the nature of hair; and probably, more peculiarly adapted to the manufacture of camelots.

In conſequence of ſucceſs, I have grown bolder in my experiment; and againſt next ſeaſon, I propoſe to flay a horſe at once,

once, and to clothe him, immediately, with as many ſheep ſkins as ſhall ſuffice for his complete inveſtiture.

After all, I muſt confeſs that this mode of procuring an additional number of wool-bearing animals, is laborious, tedious, and expenſive—not to mention the pain occaſioned to the animals, in the various ſtages of the proceſs of flaying alive. Let us not, however, deſpair of ſucceſs. And, here, let me beg the utmoſt attention of the reader, whilſt I ſhall develope to him one of thoſe *arcana naturæ*, through which, we may hope in time to be extricated from theſe *dilemmas!*

You are all, no doubt, acquainted with the celebrated Buffon —*he*, who, *par excellence*, has been deſigned *Nature's own interpreter—he*, who, deſpiſing the teſtimomy of his own neat-herd, in proof of the negative (at all times ſo very difficult to eſtabliſh), and truſting rather to his own reaſoning, from the known analogies of nature—has eſtabliſhed, by mere dint of argument, *a priori*, the fact, *that our cows annually ſhed their horns, like the deer.*—This ſame Buffon, I ſay, has alſo eſtabliſhed another fact, upon the analogy of which we may depend, in believing, that, after a certain period, the neceſſity of the Talicotian proceſs to produce wool-bearing horſes will be altogether ſuperſeded. Buffon has ſomewhere aſſured us, that, in propagating continually from a race of ſetting dogs, whoſe tails are uniformly docked, a race is at laſt produced with tails naturally of the exact length required—Nature apparently becoming pettiſh, and at length refuſing to exhauſt her powers unneceſſarily, in producing a redundance, which ſhe ſees uniformly rejected as a ſuperfluity. There exiſts, indeed, in Northumberland, a race of tailleſs ſhepherds dogs, (deſigned *ſelf-tailed*), and which I, Baron Munchauſen, aſſert to have been produced in this ſelf-ſame identical manner. Is it not, then, demonſtrably probable, at the leaſt, that, if we continue to propagate from a race of horſes, continually converted into wool-bearers by the Talicotian practice, the renitency of nature may be at laſt overcome by the pertinacity of man, and that ſhe ſhall at length conſent, of her own ſpontaniety, to produce a race of horſes ready wool-clothed to our hand?

It has been ſurmiſed, that ſeveral readers of my adventures have called in queſtion the truth of a ſtory I there relate, *of an wolf having attacked, from behind, the horſe which I drove in harneſs, eating up before him, all within the ſkin, till he found himſelf completely enveloped in* it, *and fixed in the harneſs, exactly in my horſe's place; and of my continuing to drive him to the end of the ſtage, before I perceived the change of* qui pro quo *which had been put upon me.* This, I indeed acknowledge, might have been

been one of theſe very rare phænomena which are excluſively manifeſted to myſelf alone. I truſt, however, none of your readers will entertain the ſmalleſt doubt of the truth of my Talicotian experiment, which appears ſo conſonant to the whole analogy of nature. If they do, I can only ſay, they may ſatisfy themſeves by examining my parks of Calypſo, in the land of Utopia; where they will find horſes in all the ſtages of their ſheep-ſkin inveſtiture; where alſo they will find cows more or leſs clothed with hogs-ſkin; a practice, which, if prevalent, might render your iſland leſs dependent than at preſent upon the Continent for hogs briſtles.

Beſides the augmentation of the quantity of coarſe wool, a number of economical advantages might be ſtated, as reſulting from the Talicotian practice. As, *firſt*, that we would have no farther occaſion for ſaddles; but might ride bare-backed, like our Scythian anceſtors, without danger of galling behind.

Second, Bad horſemen would no longer, for the purpoſe of breaking their fall, be reduced to the ſingle reſource of catching hold of the mane; but might ſtrike their talons, for a faſt hold, into any part of the fleece.

Third, The reaction of the ſheep-ſkin producing a certain degree of ſheepiſhneſs of nature and temperament, gelding might be laid aſide, as no longer neceſſary to produce tameneſs. Stallions might be uſed as cavalry: And, were the proceſs commenced from the ſtrong-horned Linton breed of ſheep, theſe ram-horned ſtallions might be taught to box like rams; and to charge infantry, by battering them down, in whole battalions, without danger of having their impenetrably fortified heads in the ſmalleſt degree annoyed by the puſh of the bayonet. Indeed, I am inclined to prefer very much this my mode of warlike annoyance to the one ſomewhere recommended by a correſpondent of yours, or by ſome other œconomical projector, of training bulls to gallop, after the manner of the Eaſt Indians and the African Caffres; becauſe it has been perfectly aſcertained, that, in their quarrels at paſture, a well-horned ram has ever proved an overmatch for the bull; nor can it eaſily be conceived what force of ſtability could reſiſt an overturn from a battering-ram-head, impinged with the prodigious *momentum* reſulting from the ſo much ſuperior velocity, joined to the ſo much ſuperior weight of body of the horſe. You ſhall ſoon hear from me again.

Vale.

MUNCHAUSEN.

TO

TO THE CONDUCTOR OF THE FARMER'S MAGAZINE.

On the Culture and Use of Buck-Wheat.

SIR,

CONVINCED of the high utility of an agricultural Work, ſupported by ſo great a number of practical farmers as yours has hitherto been, and fully ſenſible that it can only continue a vehicle for experimental knowledge by the correſpondence of ſuch, I beg leave to offer my mite to the undertaking, in the following thoughts on the culture and uſe of Buck-wheat; truſting you will ſuppreſs ſuch parts of the following letter as you may find trivial, or reject the whole, ſhould you deem it unworthy of inſertion.

This plant, *polygonum fagopyrum* of Linnæus, is known in every quarter of the globe. In China and Japan, it forms a very conſiderable portion of the food of the inhabitants; it is likewiſe generally eaten in Switzerland, and the ſouthern parts of France; and in Flanders, it is one of the moſt conſiderable branches of huſbandry. Gerardi ſpeaks of it as cultivated in England about the year 1597, particularly in the counties of Lancaſhire and Cheſhire. It appears, however, to have made very ſmall progreſs in this kingdom, and has perhaps received leſs attention than it deſerved.

Buck-wheat was introduced into this diſtrict, the Eaſt Riding of Yorkſhire, a few years ſince, by Sir Henry Vavaſour, Baronet, whoſe ſpirited attention to agriculture, and thorough knowledge of the Flemiſh huſbandry, has rendered the moſt eſſential ſervice. It is particularly adapted to light, ſandy ſoils, and will afford a plentiful produce in land that is by no means in good condition. I do not know any crop equally uſeful, in ſuch land, to follow the ruta baga, or other turnip which has been eaten off late in the ſpring, or where it is deſired to ſow down a field with graſs ſeeds, that has not been thoroughly cleanſed from weeds the preceding fallow; as the time of ſowing it (which in our climate ought not to be earlier than the firſt week in June) gives every opportunity for getting the land into fine order. Buck-wheat is ſaid to deſtroy weeds; but this is a circumſtance I can by no means aſſert; as, in my practice, I have noticed the contrary: and it appears to me a ſingular propoſition, though one which ſome have endeavoured to prove, that buck-wheat, from the cloſeneſs of its growth at the top, ſhould ſmother and deſtroy weeds, whilſt clover and the other graſs ſeeds receive conſiderable benefit by the ſhade it affords them from the piercing heat of the ſun: Therefore, although

I ſtrongly recommend the ſowing of graſs ſeeds with buck-wheat, when there is not ſufficient time to prepare the land for a barley or oat crop, I would not by any means adviſe the farmer to truſt to buck-wheat for deſtroying thoſe weeds that may remain in the ground, but endeavour by every poſſible care to extirpate them entirely; as the firſt principle of agriculture, muſt be the thorough cleanſing of all land from weeds. The quantity of ſeed ſhould not be leſs than two buſhels, or more than two and a half buſhels, Wincheſter meaſure. When graſs ſeeds are ſown, the ſmaller quantity will be quite ſufficient, taking care to harrow the buck-wheat exceedingly well, before the other ſeeds are ſown; and when they are, I find it the moſt adviſeable practice to roll them directly, and harrow only once immediately after. It will be remembered, that in theſe directions, I am ſpeaking only of ſuch deſcriptions of land as contain a conſiderable portion of ſand or moor; for I am of opinion, that it is only on ſuch ſoils, that buck-wheat can be conſidered a valuable crop. Whilſt upon the ſubject of laying down land to graſs, I beg leave to obſerve, that farmers too generally ſow them in a ſtinted quantity; for two or three year leas, not leſs than eighteen pounds of graſs ſeeds; and where the land is not good, an addition of a quarter of a peck of rye-graſs *(ſolium perenne)* ſhould be allowed. If the buck-wheat is mown when coming into flower, and led home as food for the draught horſes, cows, young beaſts and pigs, which is, of all others, the moſt profitable mode of uſing it, the graſs ſeeds will be much benefited. M. de Salis, in Dr Hunter's recent valuable publication of Georgical eſſays, particularly enlarges upon this ſyſtem; and he is the only perſon, I know of, who has favoured the public with any experiments upon this head. There is a general idea, that cattle of all kinds diſlike it in its green or flowering ſtate; but this is the effect of prejudice alone. All cattle, indeed, are apt at firſt to neglect food to which they are unaccuſtomed; but from my own practice, I conſider this method of uſing it exceedingly beneficial, and am fully convinced that it is a plant highly nutritious: Pigs in particular are remarkably partial to it, and I think thrive equally well upon it as upon red clover. It has ſome advantages over red clover; it will produce a far more weighty crop, and of courſe makes an additional quantity of manure: it is alſo to be raiſed in the ſhort ſpace of two months, and that upon land which could not be got into order for any other crop; and the expence of ſeed is not more than one half the expence of red clover.

The advantages of keeping a conſiderable ſtock upon green food in the farm-yard, throughout the year, muſt be generally allowed; the beſt farmers in almoſt every county in this iſland regularly

gularly practiſe it; and I doubt not but that this will daily gain ground. Red clover certainly is the beſt plant we know of for this purpoſe, (ſainfoin and lucerne excepted, and theſe can only be raiſed upon particular ſoils): but as the ſame land will not grow red clover for a number of years without change, and as all green crops ſhould be as near the homeſtead as poſſible, to leſſen the expence of leading; ſurely, upon a ſoil ſuitable for the growth of buck-wheat, it is a very valuable acquiſition, in moderate quantities, as a variety of green food.

It is further uſeful as a manure. Upon a clean fallow, I have derived conſiderable benefit from ſowing it as a preparation for wheat; rolling it down as ſoon as it is in full flower, and immediately ploughing it in. Its great ſucculency preſently brings on a degree of fermentation, that highly enriches and ameliorates the land; the only objection is, that it renders it rather too light for a winter crop. I purpoſe, this ſummer, ploughing in ten acres of buck-wheat upon a poor ſand, which, after a plentiful liming the next ſpring, I ſhall ſow down with tares and graſs ſeeds, as paſture for ſheep: in this caſe, the lightneſs and amelioration of the ſoil will be of infinite ſervice; ſeeds always coming beſt out of the ground when in that ſtate; and the treading of the ſheep will afterward render the land as firm as can be required; though a heavy roller uſed three or four times in the ſummer, would level any little inequalities of ſurface, and benefit the graſs.

Laſtly, as a corn crop, buck-wheat will be often found both uſeful and profitable, particularly in indifferent ſeaſons, as land may be ſown with it, that could not in proper time be ſown with oats or barley. The produce may be ſtated, upon the average, between three and four quarters per acre; it would be conſiderably more, did all the grains ripen together; but that never appears to be the caſe, as ſome parts of the ſame plant will be in flower, whilſt others have perfected their ſeed. It is harveſted in the ſame manner as barley, requiring only a little more time, as, from its great ſucculency, it is liable to heat; on which account, it is better to put it in ſmall ſtacks, of five or ſix loads each, than in either a large one or a barn. Buck-wheat is leſs liable to injury from a wet harveſt that any of the white crops; and the ſtraw is by no means ſo indifferent a fodder as many have reported.

Theſe obſervations are made from my own growth of it; and as I truſt I have not permitted any partiality for the grain to miſlead my judgement, they may, I hope, be relied upon. I would by no means be underſtood as wiſhing to recommend farmers to cultivate buck-wheat upon a large ſcale, in preference to oats or barley; but certainly it has ſufficient advantages, to give it a place

among crops commonly cultivated, at leaſt upon all light ſoils. I confeſs myſelf ignorant of the proportion of nouriſhment drawn from the earth by the various plants; but it appears to me, that buck-wheat does not exhauſt the ſoil ſo much as moſt others; I found my opinion upon its being a leguminous plant, and growing to maturity in ſo very ſhort a ſpace of time. Men of fortune would find it eligible to ſow in ſmall quantities, on the borders of woods or plantations, as an alluring food for pheaſants; and it is perhaps the beſt grain we have, for the feeding of pigs or poultry. Horſes thrive well upon it; and of late years the diſtillers in London have bought it readily at a price equal to that of barley. CHARLES HOWARD.

Melbourne Farm, Pocklington, May 29.

TO THE CONDUCTOR OF THE FARMER'S MAGAZINE.

Experiments in the Culture of Buck-Wheat, and Obſervations on the South-down Sheep.

SIR,

IN agriculture, as in other ſciences, it were extremely unfair to record only ſuch trials or experiments as prove ſucceſsful. As much, perhaps more, is often to be learnt from unſucceſsful reſults, as from thoſe experiments which ſucceed moſt perfectly. Yet, like medical quacks, I much fear the old ſaying is frequently verified with experimental agriculturiſts:—What good they do, the world proclaimeth; what evil they commit, the earth covereth. In conformity with the principle advanced in the outſet of this communication, I propoſe to record in your valuable Work, the reſults of ſome abortive experiments which have been attempted on my ſmall farm; perhaps, ſome of your more experienced Correſpondents may point out the cauſes of my want of ſucceſs, and the means by which ſuch crops as I attempted may in future be cultivated in this country.

A good many years ago, having read in one of Mr Marſhall's ſurveys, that *Buck*, commonly called Buck-wheat, or more vulgarly Buckety-wheat, was much cultivated in Norfolk as a valuable food for fattening pigs and poultry; and having heard that its flour made excellent pancakes, I gave it, as I thought, a fair trial. In the corner of a field, which had been turnips immediately before, eaten by ſheep on the ground, and which was to be ſown up with clover and rye-graſs, I ſowed a peck or two of buck at the ſame ſeaſon with the barley. The buck grew indeed; but turned out ſo very poor a crop, that the graſs and weeds entirely

ly got the maſtery, and it never was worth the reaping. I am ſure, I could not have procured from the patch, half the quantity of ſeed which was ſown.

Laſt year, 1802, on a ſmall field of very good turnip ſoil, with a ſound gravel bottom, which had been turnips the preceding crop, thoroughly limed and dunged, and eaten off by ſheep, I ſowed a crop of barley in drills; and with the ſecond hoeing, gave about a buſhel and half of ſaintfoin ſeed, and eight pounds of red clover to each acre. The clover grew extremely well; and a thin ſprinkling of ſtranger plants appeared, which I concluded might be the ſaintfoin. Unluckily, however, for my experiment, the barley crop became exceſſively rank; and, after harveſt, I could only find the clover in ſcattered patches, and could not be certain that a ſingle plant of what I had conceived to be ſaintfoin remained. Anxious, however, to give every chance to my experiment, I allowed the field, this year, to remain untouched, till I had completed my turnip fallow, about the middle of June. I could not then obſerve a ſingle plant, that could be ſuppoſed ſaintfoin, and the clover was ſo exceſſively thin, as not to be worth preſerving. The whole field, about two and a half Engliſh acres, had become a luxuriant crop of what we call here *knap-gowans*, and threatened to be completely poiſoned by that weed. I therefore ploughed and harrowed it three times, and made it again into turnips; which, from the uncommon drought of this ſeaſon, will never, I dare ſay, have roots of half a pound weight.

My third unſucceſsful experiment was likewiſe tried laſt year. A very ſmall field, not an acre of ground, which had received a complete ſummer-fallow, with both dung and lime, was ſown laſt Auguſt, 1802, with lucern, in drills of about a foot interval. The ſeed vegetated to a wiſh; but the froſts of laſt winter killed every plant. A few indeed, at diſtant intervals, recovered in ſpring, and grew very decently, puſhing out long ſtrong and carrot roots; but their number was ſo inconſiderable, and the weeds ſo very abundant and luxuriant, that it became neceſſary to plough all down.

Notwithſtanding my total failure in the cultivation of ſaintfoin and lucern, I have by no means given up the idea of trying both again, at ſome future opportunity; and ſhall certainly communicate the reſult to you, whether ſucceſsful or not. In the mean time I beg leave to requeſt ſome of your more experienced Correſpondents to point out ſuch circumſtances as they know are calculated to ſecure ſucceſs. As for buck-wheat, I am, at leaſt for the preſent, diſinclined to give it any farther trial; having ſeen an attempt as completely unſucceſsful as my own, on very ſuperior ſoil, and in the management of a moſt attentive and intelligent agricultu-

riſt; who, by the by, has ſucceeded in the culture of carrots; and whom I invite, if he ſhould ſee this, to communicate to you a detailed account of that branch of huſbandry; and likewiſe of his other numerous experiments in agriculture and horticulture. He cannot miſtake in this alluſion.

A very conſiderable improvement has lately been adopted in this neighbourhood, in the conſtruction of wind-mill ſails; but which I cannot properly deſcribe, being no mechanic, and therefore, not having given them that attentive examination which they certainly merit. The ſails are compoſed of a number of narrow webs of canvaſs, mounted upon rollers, and placed tranſverſe to the arms. Each arm is furniſhed with an iron rod, and ſome ſmall toothed iron wheels, ſo adjuſted, that in ſtrong winds the ſeries of ſmall ſails roll up, or furl, as it were, of themſelves; and, upon the ſubſidence of the wind, roll out, or unfurl again; thus preſerving a very conſiderable degree of equability of motion, and conſequently of power; and preventing in great meaſure, if not entirely, all danger of the wind-mil running amain.

A moſt ſpirited and intelligent country gentleman, in my neighbourhood, has lately purchaſed a ſmall flock of South-down ewes and rams, meaning to give them a trial. Though I do not pretend to be a competent judge of ſuch ſheep, I muſt preſume to ſay, they by no means promiſe to be an acquiſition to this corner of the country. Their wool, indeed, ſeems remarkably fine, even conſiderably ſuperior to that of the Cheviot or *long* breed; but their carcaſes are, to all appearance, extremely inferior, even to the common run of our improved *ſhort* ſheep, or new Leiceſter. Their legs are long and coarſe; their carcaſes looſe, thin and lank before; their backs long and hollow; their heads large; their faces and legs, black, dun, or mottled; and I ſuſpect, they will turn out very troubleſome gueſts in an enclоſed country, I mean as fence-breakers, and very little inferior in wildneſs and agility to the Lammermuir or Tweeddale breed.

It is, however, certainly of moſt material importance, that more than one breed of ſheep, eſpecially in reference to wool, ſhould be carefully improved in all poſſible reſpects, and adapted with judgment, and by means of experience, to various ſoils and ſituations. I doubt, if, at preſent, there is any breed in the iſland to be compared, for profit to the farmer, on good ſoils, with abundance of winter food, to the new Leiceſter ſheep: but as their wool is only fit for certain purpoſes, were they to become univerſal, or even too general, it would become a drug, and wool for finer fabrics vaſtly too ſcarce and dear. On theſe principles, I imagine, that the South-down breed of ſheep, by

proper

proper management, and by ſelection of the beſt formed individuals of both ſexes to breed from, may become a very valuable variety ſome time hence, when the new Leiceſter may, perhaps, have been too largely diffuſed. On this ſubject, however, we need be under no apprehenſions: The ſagacity of agriculturiſts is ever alive, as it ought to be, to diſcover what is beſt for their preſent intereſts; and, whenever long combing wool ſhall be no longer in requeſt, and fine ſhort wool is in demand, their attention will naturally turn to the ſide on which profit is moſt readily to be procured. In the mean time, it is highly laudable for ſpirited country gentlemen to try any breed, which, either ſpeculatively or experimentally, promiſes to be uſeful. Such conduct keeps alive the ſpirit of inquiry and compariſon; and preſerves and propagates varieties of that moſt uſeful animal, ready at all times to be taken up, on an extenſive ſcale, by the profeſſional and experienced agriculturiſt. My own opinion, though of little value on this ſubject, is, that the South-down is better adapted for dry upland paſtures, not coarſe mountain ſituations; and the new Leiceſter for improved low-land grounds, which can always command a full ſufficiency of ſucculent winter food; and that without this laſt, eſpecially turnips, the new Leiceſter cannot be profitably kept any where.

In thoſe parts of England, where the barbarous townſhip huſbandry prevails, and where its almoſt neceſſary concomitant, folding the fallows, is ſtill even enjoined, to attempt a flock of new Leiceſter ſheep, muſt be the height of folly; and, if obſtinately perſiſted in, muſt neceſſarily end in ruin both to the flock and the maſter. But, I believe, the South-down ſheep poſſeſs ſufficient hardihood to bear up againſt all the miſeries of that wretched ſyſtem, with tolerable negative ſucceſs: They can live and produce a ſcanty fleece, and a ſtarved ſtore lamb, where the new Leiceſter muſt of neceſſity fall a martyr to ancient prejudices, leaving little elſe than its naked *pelt* to the farmer.

Merſe, 15. *Sept.* 1803. *R. r.*

TO THE CONDUCTOR OF THE FARMER'S MAGAZINE.

Obſervations on the Act for making better Proviſion for Parochial Schoolmaſters.

SIR,

You have at different times recommended an augmentation of the ſalaries, paid by the landed intereſt to parochial ſchoolmaſters; and in laſt Number, (p. 352), expreſs much ſatisfaction

that a bill had paſſed through Parliament, which you think will meliorate their ſituation conſiderably. Give me leave to ſay, that if you had beſtowed your uſual attention upon the ſubject, you would not have rejoiced at the late enactment. If the ſchoolmaſters were conſulted upon that occaſion, and gave their approbation to the *whole* clauſes of the bill, then I muſt be allowed to declare, that they have, like Eſau of old, ſold their birth-right for a meſs of pottage. Let any liberal-minded perſon examine the following clauſe, which ſtands the 21ſt in the bill, and ſay, whether the ſchoolmaſters of Scotland are not thereby deprived of rights belonging to every other claſs of Britiſh ſubjects.

'*And be it enacted, That when any complaint from the heritors, miniſter, or elders, againſt the ſchoolmaſter, charging him with neglect of duty, either from engaging in other occupations, or from any other cauſe, or with immoral conduct, or cruel and improper treatment of the ſcholars under his charge, ſhall be preſented to the Preſbytery, they ſhall forthwith take cognizance of the ſame, and ſerve him with a libel: if the articles alleged, appear to them to be of a nature which requires it, and having taken the neceſſary proof, they ſhall acquit, or paſs ſentence of cenſure, ſuſpenſion, or deprivation, as ſhall appear to them proper, upon the reſult of ſuch inveſtigation;* which judgement ſhall be final, without appeal to, or review by, any court, civil or eccleſiaſtical: *And in caſe they ſhall depoſe the incumbent from the office of ſchoolmaſter, his right to the emoluments and accommodations of the ſame ſhall ceaſe, from the time of his depoſition: And in caſe he ſhall fail or refuſe to remove from the ſchoolhouſe and garden, within the ſpace of three months from the date of ſuch ſentence of depoſition, the Sheriff of the ſhire, or Stewart of the ſtewarty, upon having an extract, or certified copy of the ſentence of depoſition by the Preſbytery, laid before him, ſhall forthwith grant letters of ejection againſt ſuch ſchoolmaſter; of which no bill of ſuſpenſion or advocation, nor action of reduction ſhall be competent; and in caſe of ſuch depoſition, the ſchool ſhall immediately be declared vacant, and the election of another ſchoolmaſter ſhall take place.*'

Why ſchoolmaſters ſhould be deprived of the right of appeal, is a problem difficult to be ſolved. That it ſhortens buſineſs, is unqueſtionably true; but, by a parity of argument, an extenſion of the principle to every cauſe that comes before the civil and eccleſiaſtical courts, would be equally uſeful. The Church of Scotland has never laid claim to the gift of infallibility; and it is the height of incongruity to ſuppoſe, that her ſecond loweſt court is fallible in caſes of the moſt trifling deſcription, and infallible in thoſe which affect the character and fortune of certain people, unfortunately conſidered in a leſs reſpectable light than what their general merits and uſefulneſs to ſociety warrants them to be regarded. I am, Sir, yours, &c. URBANUS.

TO

TO THE CONDUCTOR OF THE FARMER'S MAGAZINE.

On the Malt Tax, with a Propoſal for aſcertaining the Relative Qualities of the Barleys of England and Scotland.

SIR,

IT was but the other day I got your Magazine of May laſt. Upon the ſubject of an equal malt duty upon grain the produce of Scotland as of England, I have heard and read ſome ſenſe, and much nonſenſe; but the one who ſeems to underſtand the matter moſt thoroughly, is your Correſpondent N. beginning in page 224. And the experiment he mentions in page 226, to have been tried in the year 1787, upon equal quantities of Norfolk and beſt Scots barley, the latter being 3 lib. per boll heavier than the other, would be perfectly deciſive of the queſtion, had your Correſpondent thought proper to have the fact authenticated with the names of the perſons who made that experiment. Without that, it is no more than the bare aſſertion of an anonymous author; ſo cannot be attended to in Parliament. It is too late for this ſeſſion: But as the news-papers tell us, a hint was given, that, upon evidence being produced of the juſtice of our Scots claim, to a large diminution of that tax, ſo ruinous to our agriculture, redreſs would be given; it ſurely were well worth while, early after next harveſt, to apply to the Commiſſioners of Exciſe, Barons of Exchequer, or other public office, to appoint a maltſter, diſtiller, and brewer, men in whom the Commiſſioners, &c. have confidence, to repeat the experiment of 1787; and ſhould the reſult be the ſame, or nearly ſo, get it atteſted by the Court that authorized it, and a printed copy ſent, under a blank cover, to each member of Parliament in London. I need not add, that this ſhould be done as early in next ſeſſion as poſſible, that the affair may be taken up without delay; and our farmers have timeous warning to lay out their land for barley, or give up the ſowing of it altogether; as I apprehend they muſt, if no relief, or but a trifling one, is granted on malting. By the general name of barley, I mean every ſpecies of grain that is commonly uſed for malting; for the growth of real barley, I am convinced, is attempted in few places in Scotland; and in fewer can it be cultivated with advantage. What is generally held out as barley, is a mixture of it and bear, which our climate and ſoil are more adapted to; and in the part where I live, the farmers have almoſt univerſally taken to it, though it muſt be a bad crop, as the different grains are ripe at different times, and cannot ſpring equally in malting: in proof of which, I have obſerved ſeveral fields, where, a fortnight ago, a tolerably thick crop of bear was ſhot; and, this day, going round

round them, ſee the thickneſs nearly doubled, by the barley being now ſhot alſo. This is the caſe in a diſtrict generally held to be one of the moſt fertile in Scotland after East-Lothian and the Carſes, lying between the ſea and the ſpot where, I believe, your Publiſher firſt ſaw the light. Many of the beſt farmers ſpeak of returning to the old bear alone.

I have not time at preſent to ſay more, but may perhaps, when at leiſure, give you ſome ſtrictures on the friendly diſpute between Sir John Sinclair and Mr. Dempſter. Meantime, I am

Your very humble ſervant,

July 12. Y. X.

NOTE BY THE CONDUCTOR.

The ſcheme for aſcertaining the relative qualities of Scotiſh barley with thoſe of England, pointed out by our Correſpondent, ſeems to be a fair and deciſive one; though we apprehend, from the earlineſs of the harveſt this ſeaſon, that the reſult would not procure the juſtice for this country, which a general inveſtigation, in ordinary years, would enſure. If he will be ſo good as ſend his addreſs to the Publiſher, a particular account of the trial made in 1787 ſhall be forwarded; we not being at liberty to mention, in a public manner, the name of the gentleman who gave us the communication, though perfectly ſatisfied with its authenticity. N.

TO THE CONDUCTOR OF THE FARMER'S MAGAZINE.

Remarks on the Review of Peebles Survey.

SIR,

I am, on the whole, well pleaſed with the review of Peebles ſurvey; but in one point I think the Reviewer is incorrect. It is where he animadverts on Mr Findlater's obſervation, that the knowledge of the food of plants ought to be the foundation of the whole practice of agriculture. In this, I apprehend Mr Findlater is right; and the Reviewer perhaps wanders, when he ſays, that as we have not the command of fire, air, or water, little benefit would be gained by that knowledge.

Fire, air and water, are eſſential for ſupporting the exiſtence of animals as well as vegetables; but as each diſtinct tribe of animals has a peculiar food, beſides thoſe neceſſary for its ſubſiſtence, ſo, it is probable from analogy, that every diſtinct ſpecies of vegetables has a proper food beſides what is common to all. Earth and dung are very vague words in the ears of the chemiſt; as indefinite as animal and vegetable food. A particular ſort of food is neceſſary for

for giving any animal all the energy it is capable of. A man, for inſtance, may live on vegetables alone. He might even live, but he could not thrive, on graſs and other vegetables that would fatten a cow. So, for inſtance, it is probable, a plant of barley may live on what would be prejudicial to wheat. The one may flouriſh on oils, the other on ſalts.

Hence it would doubtleſs be deſirable to know what is the food of plants. It would amend in a thouſand particulars the practice of agriculture; and one of the firſt advantages that might be expected to reſult from it, would be the ſaving of the one half of the ſeed now profuſely thrown into the ground.

The neweſt theory relative to the food of plants is, that it is the gaſes or airs, different kinds of which may be extricated in more or leſs quantities from particular ſubſtances, and applied to their nouriſhment: although, from ſome trials, I am not inclined to adopt that theory. NOVICE JUNIOR.

NOTE BY THE CONDUCTOR.

We are happy to give all praiſe to the ingenuity of our worthy Correſpondent, but do not think he has ſaid any thing which can affect the opinion given by our Reviewer, as we are ſtill left completely in the dark reſpecting the food of plants. In the courſe of an extenſive practice, upon almoſt every kind of ſoil, we have never diſcovered any kind of manure which benefited one kind of grain, and proved prejudicial to another. We ſubſtitute manure for the food of plants; being decidedly of opinion, that he who can accumulate the greateſt quantity thereof, will, under a parity of circumſtances, always raiſe the largeſt crops. On the food of plants, ſpeculative inquirers may amuſe themſelves, by ingenious diſquiſitions: but the true practical agriculturiſt, who has *term time* in view, will narow his inveſtigations; and reſt ſatisfied, that good tillage, liberal manuring, and ſufficient drainage, will in every caſe enſure ſucceſs, unleſs phyſical circumſtances obſtruct the operation of theſe neceſſary agents. N.

TO THE CONDUCTOR OF THE FARMER'S MAGAZINE.

A Law recommended for Regulating Drainage.

SIR,

WHILE paſſing ſome days in a highly cultivated county lately, I was ſorry to ſee conſiderable tracts of good land loſt to the proprietors and the public, for want of draining, which might be effected at a ſmall expence.

Upon

Upon inquiring into the cauſe, I was informed, that it had long been the wiſh of ſome of the proprietors and tenants; but that the main drain which behoved to be deepened, was a march ditch involving ſeveral intereſts; and though all would derive very conſiderable benefit, it had hitherto been impoſſible to get the parties to agree.

This is a ſerious evil; and I ſhould think might be obviated, without much difficulty, by an act ſomewhat ſimilar to that reſpecting fences. I ſhould however propoſe, that all diſputes of this kind ſhould be ſettled by arbiters, mutually choſen by the parties, if they can agree; if not, then the Sheriff of the county to name them; which arbiters ſhould have full power to award each perſon's ſhare of the expence, &c. &c.; and alſo, that their deciſion ſhould be final, without the power of appeal by any of the parties.

I am of opinion that it would alſo be an improvement upon the Act for regulating March Fences, were diſputes left to arbiters as above.

No man can have a greater reſpect for the Sheriff courts than I have; but it muſt be allowed, that the generality of gentlemen filling the office of Sheriff, though well verſed in law, have but an indifferent knowledge of country matters.

If you think the ſubject of the above hints worthy of notice, I will be extremely happy to ſee your remarks on them.

Yours, &c.

AN OBSERVER.

18. *June*, 1803.

NOTE BY THE CONDUCTOR.

We perfectly concur with our Correſpondent in thinking, that a law is much wanted for regulating drainage; becauſe, under the circumſtances condeſcended upon, it is impracticable for an individual, however well inclined, to drain the lands in his poſſeſſion, unleſs conterminous poſſeſſors can be obliged to join in the previous operations.

From our intimate knowledge with the diſtrict alluded to, we can ſafely declare, that the hints offered above are well founded; and we truſt the ſubject will be noticed more largely on an after occaſion. We have only to add, that the future correſpondence of the '*Obſerver*' will be highly acceptable.

TO THE CONDUCTOR OF THE FARMER'S MAGAZINE.

Thoughts on the Import and Export of Grain, and on the high Duties on Diſtillation.

SIR,

ON examining the accounts of exports and imports of grain preſented to the Houſe of Commons, as publiſhed in the 2d vol. p. 327. of your Magazine, it appears that, during the firſt 50 years, the exports exceeded the imports, to the very large amount of 29,256,573 quarters of grain of different ſorts; and that in the laſt 48 years, ſay from 1751 to 1799, the imports exceeded the exports by 13,674,979 quarters. If we add what has been imported during theſe laſt four years, I think you will find the imports of grain little ſhort of 20,000,000. You will obſerve, theſe imports conſiſted of wheat, oats, rye, and peas; while there was a ſurplus of 3,738,300 quarters of barley, exported in that time; from which it appears, we have a large ſurplus of barley, annually, more than is conſumed at home. This ſhould be generally known, in order that farmers may learn the real cauſe of the frequent, and particularly of the preſent depreſſion of that article; that they may provide againſt it, as far as lies in their power, when the nature of the ſoil, and engagements with their landlords will admit, to raiſe more wheat and oats in its place. Indeed, from theſe accounts it appears, that from the year 1790 to 1799, we imported a little barley; but it is to be remembered, that, in that time, the duties on the diſtilleries were very ſmall, in compariſon to what they now are; which, together with the high duty on malt, muſt make barley every ſeaſon a moſt unſaleable article, ſo long as the preſent ſyſtem continues; and while it does, it muſt be as heavy a preſſure on agricultural improvements, as the tithe ſyſtem in England is, which you ſo juſtly reprobate. The Government are ſo fully occupied in watching and guarding againſt the deſigns of an inveterate enemy, that they have little time to beſtow on agricultural improvements; which, after all, I think ſhould be the firſt object of every government, eſpecially after what was felt in 1800 and 1801. But if the landed intereſt have any influence on the Legiſlature, I would think it might naturally occur to them, that laying a duty on the diſtilleries nearly equal to a prohibition, muſt tend to depreſs their tenantry, while it holds forth a premium to the farmer abroad; and the ſmuggler, who ſupplies the country as regularly with gin, that pays no duty, as our home diſtiller could, if he were not under ſuch reſtrictions. No doubt, when ſpirits were low-priced, the people made a bad uſe of them; but at that time, trade was proſperous, wages high,

and

and a political phrenzy in their minds. The very oppoſite is now the caſe. Spirits are ſtill conſumed, but in more moderation; and as they are become an eſſential article of conſumption, better ſupply them with Britiſh than with foreign. Mr PITT was aware the people in this country had a ſtrong propenſity for gambling; and he turned this to a great national account, from which he and his ſucceſſor draw about 300,000l. annually. Should this ſame police lead government to gratify the public with Britiſh ſpirits, and to drive the ſmuggler from the coaſt, there is little doubt but there would be above 1,000,000 quarters more barley conſumed in that article, and above a million ſterling of more revenues raiſed than at preſent, which the country loſes. It would alſo give ſuch a ſpur to agriculture, as would likely be the means of raiſing ſuch ſupplies of all other ſorts of grain, as might in time prevent us from depending for a part of our bread-corn on foreign countries. As it appears from your 2d vol. page 135-6, that not one half of the land in Britain, fit for cultivation, is under the plough; it muſt be owing to the want of internal encouragement, that we at any time ſtand in need of foreign ſupplies; having ample means within ourſelves, not only for ſubſiſtence but even for exportation to other countries, if our reſources were brought into action. I hope your Publication, being conducted on liberal principles, will be attended to by thoſe who have power to remove the obſtacles to improvements; and that, in place of being dependent upon other nations for corn, we may in time have a ſurplus to part with, which is the earneſt wiſh of

A FORFARSHIRE FARMER.

P. S.—Should the above meet with your approbation, I mean to propoſe, hereafter, a mode for the conſumpt of barley, ſimple in its nature, but beneficial to the landed intereſt and the community at large.

TO THE CONDUCTOR OF THE FARMER'S MAGAZINE.

Letter from Dr Hunter, York.

SIR,

THE incloſed is intended as a paper in the 5th or 6th vol. of the Georgical Eſſays; and if it ſuits your Magazine, it is at your ſervice in the November Number, which will be ſome months before my publication. I find many papers of mine inſerted in an Agricultural Magazine, publiſhed in London; and theſe papers not being mentioned *as extracts from the Georgical Eſſays*, have the appearance of making me a ſupporting correſpondent of that Work,

Work, which I really am not. I never ſhall communicate with any periodical work, yours excepted, and perhaps with the Annals. Let me hear from you ſoon. Have you ſeen Dr Harriſon's theory of the rot, in Mr Young's laſt number? I by no means coincide with him in opinion. The diſeaſe moſt certainly proceeds from an organized animal bred in marſhes. It is commonly called a *fluke*, from its reſemblance in ſhape to a flounder, or rather a ſole. It is found in all the biliary ducts, and nowhere elſe. I have a paper on the ſubject. Some circumſtances regarding the rot are curious. I ſee no way how to make a medicine to operate upon thoſe flukes, in conſequence of their having taken ſo ſingular a ſituation. The foot rot is alſo an obſcure diſeaſe; when inveterate, it eats away the very hoof.

I am, yours, &c. A. HUNTER.

On the Smut in Wheat.

OF the ſmut there ſeems to be two kinds; the one comes out a little earlier than the other, but both ſpring from the ſame root, and have the ſmut formed in what I call the *uterus*, or *folium vaginans*, ſome time before the ear makes its appearance. The one that is the moſt early, comes out naked, the whole of its chaff being quite deſtroyed; ſo that the duſt is moſtly carried off by the wind before the crop is harveſted. This kind is conſidered as the leaſt deſtructive of the two, as what of the duſt remains, may be removed when ſpread upon the thraſhing floor. But I am not quite certain, whether the wind may not be the means of conveying it to ſound ears, at that time haſtening to maturity in the ſame field. The other kind of ſmut does not deſtroy the chaff; ſo that the ear puts on a healthy appearance. The ſmut is contained in round bags compoſed of a dark green cuticle, which, when broken, diſcharge the black powder. This is more dangerous than the other, as the ſmutty ears cannot be diſtinguiſhed from ſuch as are ſound, even when placed upon the thraſhing floor. The ſmut is evidently a minute vegetable body, of the order of *fungi*, and may frequently be conſidered as a paraſitical plant; but how it comes, at ſo early a period, to take poſſeſſion of the infant germ, is a matter hitherto unknown. It is moſt certain, that when this black powder is rubbed upon ſound grain, that the produce will be in general ſmutty. I have ſometimes found ſound ears to ariſe from an infected root; and I have ſeen, though but ſeldom, ſound and ſmutty grains in the ſame ear. The whole of this part of natural hiſtory, is wrapt up in obſcurity; but it is a ſingular happineſs, that the negative principle of ſmut may be deſtroyed by certain ſteeps, well-known

to

to the farmer. Theſe ſeem to operate in a twofold capacity, by deſtroying the germination of the ſmut, and by allowing the farmer to ſkim it off during the time of brining. When ſtale urine and lime are alone uſed, it is plain that the cultivator has no view beyond the deſtruction of the vegetative principle of the ſmut; a practice recommended by many judicious farmers, in *preference* to brining and ſteeping.

York, Aug. 26. 1803.

TO THE CONDUCTOR OF THE FARMER'S MAGAZINE.

SIR,

I obſerve ſome ſatisfactory remarks in your laſt (page 350), relative to the Income or Property tax, ſo far as it affects the poſſeſſors of land in Scotland; and judge that additional light may be thrown on that important queſtion, by publiſhing the following Memorial from fifteen reſpectable Eaſt-Lothian *farmers*, preſented to the *Right Honourable Henry Dundas*, (LORD MELVILLE), when the firſt act for levying a tax upon income was under conſideration of Parliament. I do but juſtice to that Honourable Perſon, when I ſtate, that the application was received with marked attention; and that a polite anſwer was inſtantly tranſmitted to the Memorialiſts. I may alſo add, that it was generally believed, the relief then granted, proceeded entirely from the exertions of Lord Melville; to whom Scotland is undoubtedly under more numerous obligations, than to any Miniſter who has guided her internal concerns, ſince the Union of the two kingdoms. I am, yours, &c.

A FRIEND TO MERIT.

Unto the Right Honourable HENRY DUNDAS, one of His Majeſty's Principal Secretaries of State,

The MEMORIAL *and* REPRESENTATION *of ſeveral Farmers in the County of Eaſt Lothian, in behalf of themſelves, and other Occupiers of Land, in that part of Great Britain called Scotland.*

Humbly Sheweth,

THAT the Memorialiſts obſerve, from the votes of the Houſe of Commons, that a bill for impoſing a tax upon income, is now before that Honourable Houſe; which, if they are rightly informed, will operate with peculiar hardſhip upon all farmers of land; and more particularly, upon thoſe reſiding in this part of the United Kingdom, where improvements are generally in their infancy, and rents payable in a different manner than what is commonly practiſed in England.

Your

Your Memorialiſts have no objection againſt the tax, provided it is levied upon them in the ſame proportion as upon other claſſes of the community; but, with ſubmiſſion, they apprehend that the mode propoſed for aſcertaining their incomes will be fallacious and unjuſt, if, as they are informed, the reſpective ſums payable by them to their landlords in name of rent, is to be taken as the criterion. In former times, when rents were low, this rule, with ſome juſtice, might have been adopted; but from the late great riſe of rents, the increaſed value of labour, and the comparative low prices of produce, their incomes cannot fairly be eſtimated at more than one fifth of the rental; and upon a number of farms ſet within theſe few years, if that eſtimate was taken, it would even be overrated.

The Memorialiſts beg leave to ſuggeſt another circumſtance which renders every reference to rent improper for aſcertaining the income of the poſſeſſor; which is, that ſome farms, from fertility of ſoil, local advantages, &c. are naturally capable of paying a much greater ſhare of produce by way of rent to the proprietors, than others not ſo favourably ſituated, although the incomes of the poſſeſſors, in both caſes, may be equal. Some farms have been ſet, where the landlord may be conſidered as receiving one half of the produce raiſed upon them; whereas in others, where the ſoil is not ſo fertile, and greater outlay required, the proprietor cannot receive one fifth. The tenants upon theſe different farms would therefore, according to the propoſed mode, be rated towards this tax upon different *ratios*, as their incomes are not in proportion to the ſums payable to their reſpective landlords.

Another objection occurring to your Memorialiſts is, that the occupiers of land lately ſet, will be far heavier taxed than thoſe who poſſeſs leaſes of a more ancient date. The latter will, in few caſes, pay more than ten *per cent.* upon income, while the former would generally be aſſeſſed to the extent of twenty, thirty, forty, and even fifty *per cent.* of the *real* profits. This difference muſt unavoidably take place, if rents are to be aſſumed as a criterion for aſcertaining income.

But what ſtrikes your Memorialiſts as a peculiar objection to this mode, and which they have no doubt will engage your marked attention, is, that farmers in Scotland will generally be rated a great deal higher than their brethren in England. In Scotland, all rents, in the firſt inſtance, are received by the landlord, who pays every public burthen, a few trifling articles excepted; whereas, in England, the *nominal* rent does not, in moſt caſes, exceed one half of what may be called the *real* rent,

as all parochial and parliamentary taxes are payable by the tenantry. This difference of ſyſtem would neceſſarily occaſion the farmers in the different countries to be rated upon different principles, even ſuppoſing their incomes to be exactly the ſame, and would introduce a moſt invidious diſtinction.

Your Memorialiſts beg leave to repeat, that they have no objections againſt the tax upon income, providing their incomes are to be aſcertained in the ſame manner as thoſe of other people, that is to ſay, by their abilities to pay the tax; otherwiſe it would aſſume a different form than a tax upon their incomes. They believe it will be much eaſier to aſcertain the *real* income of the farmer, whoſe concerns are all winded up within the year, than thoſe of the merchant and manufacturer; and they, with ſubmiſſion, claim that their proportion of the tax ſhould be aſcertained in the ſame way as the incomes of every other claſs. They preſume, that the real principle of the act now before the Houſe is, that every man ſhall pay one tenth of his income towards the ſupport of Government: Therefore, in making this claim, they requeſt no exemption.

Your Memorialiſts truſt you will take this buſineſs under ſerious conſideration; and, from your known attention to the public welfare, that they will, through your interpoſition, experience that relief in the premiſes which juſtice requires.

TO THE CONDUCTOR OF THE FARMER'S MAGAZINE.

EPICURUS, *in Reply to the* BREEDER *of* COALHEAVERS' MUTTON, *and F.'s Obſervations on Houſe Lamb; with Remarks on the proper mode of aſcertaining the real value of the New-Leiceſters, by a comparative Trial with the other Breeds of Sheep in the Iſland.*

SIR,

IT has given me pleaſure to obſerve, that the ſtricture which I made on the paragraph inſerted in the Edinburgh newſpapers, holding up Mr Brodie as the perſon who firſt introduced the feeding of houſe lamb into Scotland, and to whom the butcher markets of the city of Edinburgh have often ſtood indebted, has been the means of introducing into your uſeful Work a diſcuſſion concerning the various ſpecies of Sheep *at preſent reared in Britain.*

I hope the champions of the different breeds will come forward, and argue the merits of their particular favourites: For

I perfectly agree with your respectable correspondent Mr Dempster, that it is the sparks from the collision of argument in a free inquiry, that must light up the torch of truth, by which mankind only can explore their way to the tree of knowledge; a plant of heavenly growth, that must strike root, and grow out of facts, and must be trimmed and trained up by experience alone, before it can perfect its fruit, but not by the speculative opinions, even of the most learned and eminent men, *as is evident from the history of the progressive improvement of the human mind; for whilst mankind continued to fill the world with disputes on the speculative opinions of Plato, or of Aristotle, and other great men, they made but poor progress in the discovery of useful knowledge, only becoming adepts in the war of words, and slaves to superstition; till the immortal Bacon arose, who taught mankind to make experiments, and argue from facts.* By recording, therefore, facts in agriculture, and bringing them before the public, that they may be tried by the test of opinion, your periodical Publication is well adapted for promoting the improvement of Agriculture. I, however, have my doubts, if the marks of approbation or dislike which you make, as Conductor, upon sundry of the papers inserted in the Magazine, will not have the effect to retard this improvement; for numbers of your readers will form their own opinion from yours, without inquiring into the matter; the greatest bar to the progress of knowledge, being that propensity in the generality of mankind to pin their faith to this or that great man's opinion, name, or authority, rather than be at the trouble of inquiring into the merits of the cause themselves: and in this, they very much resemble the sheep we are treating of; for when a leader, more bold than the rest, runs in a particular direction, all the rest follow at his tail, without reflection. On the other hand, the vain will be disgusted, if you take no notice of their performances; whilst others, from timidity, will keep back their information on important subjects, when they observe your sentiments differ from their own: And I actually know this to be the case with a farmer who has made comparative trials of the value of horses and oxen in labouring his farm, and gives the preference to oxen; but will not communicate his observations; because he says that you are always at exercise, with your sword ready drawn, and is afraid lest you wound him to the quick with the sharp nib of your critical pen.

This train of thinking always entered my mind upon perusing the notes which you, as Conductor, attached to various papers published in the Farmer's Magazine; and shall therefore proceed to make some observations on your Remarks on the

Modern Improvement of Farm Stock, and thoſe that were inſerted in anſwer to it, as belonging more particularly to myſelf.

You ſay, No. XIII. p. 37, that 'I have certainly conſidered only one ſide of the queſtion, and even that, not in a true farming point of view;' adding, 'that they (the Leiceſter ſheep) are not ſo agreeable to the Epicure's palate, we concede, though we by no means allow, this to be the criterion which ſhould determine the merits of the matter.' I conceive the merits of the matter and queſtion to be, Whether or not the butcher markets of the city of Edinburgh have ſtood indebted to Mr Brodie for introducing houſe-lamb and large mutton, ſo as to have his name obtruded upon the public as a benefactor to his country? I do not think the well-ſupplied markets of Edinburgh could ever ſtand indebted to any individual, for the quantity brought to market, ſo as to have his name inſerted in the newſpapers, like thoſe illuſtrious donors who ſend a cart-load of coals, or a fat ſheep, to warm and feed the poor priſoners, in the city jail, at Chriſtmas. If, therefore, you conſider the ſcope and intention of my remarks, you muſt allow that I have not conſidered the ſubject I was treating about improperly. What had Epicurus to do with profit and loſs, or a true farming point of view? he occupied no ſuch ground; therefore your obſervations were not at all in point.

In your remarks, No. XIV. p. 168, you ſtate, '*That* the New-Leiceſter, or improved breed of ſheep, are more profitable to the farmer, in general caſes, than many other breeds, *may almoſt be received as an axiom.*' But I beg leave again to refer you to your remarks in the 9th page of No. XIII. wherein you ſay, 'We do not aſſume the privilege of conveying information in a didactic manner.' In my opinion, however, the information given above is extremely dogmatical; for where are the ſelf-evident facts, on which you found this axiom? Why have you not conveyed to us the proofs on a matter of ſuch general utility, in order that they may be examined with ſcrutinizing eyes, before they are ſanctioned by public opinion, and received as the foundation of your axiom, which is a propoſition certainly not evident at firſt ſight? You know the difficulty of drawing concluſions from experiments or practices in agriculture; and are we to adopt as axioms, the aſſertions of intereſted perſons? In ſaying this, I diſclaim all perſonality, and only wiſh to ſhoot at folly as it flies; for mankind every day deceive themſelves: and when an improver in agriculture mounts his hobby, and brings him to market, he naturally thinks no price equivalent for ſo valuable an animal: But the purchaſer muſt be credulous in the extreme, who, without a long and proper trial, attaches to all the parts

of

of this moſt wonderful animal the fanciful properties which the ſeller ſo anxiouſly points out to him, in order to make him part with his money the more freely. To put this argument in a ſtronger point of view, I beg leave to ſtate the following fact.—The agriculturiſts in France are at preſent extremely anxious to improve the breed of ſheep; and, in order to produce long wool in that country, ſimilar to the long wool in England, theſe improvers have wiſely found out, that allowing the wool to remain two or three years on the backs of their ſheep, makes it grow two or three times its ordinary length: And they ſay farther, that they have tried the experiment with the greateſt ſucceſs, and that it produces wool, longer and finer than the wool of England, without doing the ſheep the ſmalleſt injury. And this doctrine is now taught in all the ſcientific ſchools in France, and is followed by all the patriotic improvers of farm ſtock in that country. It will not, however, be ſoon received as an axiom in Britain; and ſhows the abſurdity of placing implicit faith in the hobbies of improvers, before they are tried by the teſt of experience.

I ſhall now proceed to make ſome remarks on the papers in your laſt Number (XIV.), which were intended as anſwers to my obſervations on the modern improvement of farm ſtock; and ſhall begin with the breeder of coalheavers' mutton, as by far the moſt reſpectable. 1. It is not at all ſurpriſing that this gentleman ſhould reſpect thoſe who poſſeſs ſpirit and enterpriſe to give large prices for ewes and tups, by way of introducing a moſt valuable breed into Scotland. This is very natural, as it encourages the trade, and keeps up the extravagant prices of the article. He has taken great pains to tell us, that Mr Brodie has been a moſt ſucceſsful farmer; *ergo*, others ſhould follow his example, and give eighty guineas for the hire of a ram, in order to better their fortunes. I eſteem Mr Brodie's enterpriſing ſpirit, as well as the Breeder of coalheavers' mutton; but ſee no reaſon, on that account, why the public ought not to be undeceived, when an attempt is made to impoſe upon them. That he was the firſt perſon who introduced houſe-lamb into the Edinburgh market, is an idea abandoned; as to his mutton, the butchers univerſally ſay, we do not like the New-Leiceſters ſo well as the black-faced breed, becauſe they do not give ſatisfaction to our cuſtomers. No matter. 'Mr Brodie will benefit himſelf ſtill more by introducing this breed of ſheep, which is perhaps much wanted in Scotland. Now, if a man deſerves well of his country who raiſes two blades of graſs, or two ears of corn, where one grew before, is he not alſo deſerving of praiſe who produces two pounds of mutton, where only one was formerly produced?' Moſt undoubtedly. But where

are the proofs of this? For, in this particular, I will not credit the aſſertions of even Meſſ. Bakewell, Cullie, or Brodie; becauſe they cannot be conſidered as impartial judges. But allowing the Leiceſter ſheep to be a valuable breed, I flatly deny that Mr Brodie has the merit of introducing them into Scotland: nor will I mention him amongſt thoſe illuſtrious names, the Duke of Buccleugh, the late Earl of Hopetoun, and other noblemen, who brought Mr Bakewell's ſheep into this country. And I have only to ſtep over the boundary of his farm, at Upper Keith, into the fields of his neareſt neighbour, to particulariſe Mr Brown of Johnſtonburn, and his friend the late Mr Hepburn of Clerkington, who went on purpoſe to viſit Mr Bakewell at Diſhley, and purchaſed rams and ewes of his moſt approven breed; as alſo, if my memory ſerves me, ſtallions and brood mares, young bulls and cows: all of which they introduced into Scotland many years before Mr Brodie ſtocked his farm at ſecond hand, or gave the high prices for the rams and ewes of the New-Leiceſter breed, ſo much vaunted of. But before that the ſuperiority of this breed over all others is received as an axiom, many and repeated trials ought to be made, in various ſoils and ſituations, at different heights, from the ſhores of the ocean, to the ſummits of the mountains. I cheerfully admit, that theſe are a valuable breed of ſheep, in ſituations where they are conſtantly ſupplied with a full bite of the richeſt food; and only contend, that their merits have never yet been properly aſcertained, and are probably much overrated by their breeders.

But in order that the merits of the different competitors may be juſtly appreciated by well authenticated facts, let a field, or fields, of an equal quality of ſoil, be divided by a railing, and each of the diviſions *ſtocked up* about Auguſt, one with the New-Leiceſters, the other with the black-faced breed; two choſen little flocks picked out by their reſpective breeders, in the ſame condition, as to age, fat, &c.; let each of the flocks be accurately weighed, when they are put into the encloſure; and if turnips are deemed neceſſary for ſupporting the New-Leiceſters through the winter, let the black-faced be ſerved with an equal quantity. Next ſummer, when the lambs are fit for yeaning, let the ewes and lambs of each breed be again weighed: the ewes being then withdrawn, the lambs are to continue, and ought to be weighed again at the end of the ſeaſon, before they are put to turnip; again, when they are put into their reſpective encloſures, when clipped; and at the end of the ſeaſon, they may be ſlaughtered, and the weight and value of their quarters, wool, tallow, offals, and quality of their fleſh, will all be accurately aſcertained; or if it is judged neceſſary, the experiment may be continued in this

manner,

manner, till the ſheep are two, three, or four years old. Similar trials ought alſo to be made with the Leiceſters and Cheviot breed, Ryeland and South-down, not forgetting the Caithneſs and Zetland, in various ſituations, from the moſt ſheltered, to the coldeſt expoſures: and after repeated trials, it would then be known, if the New-Leiceſters are the moſt proper and profitable kind of ſheep, for conſuming the ſheep paſtures of England and Scotland, or within what range of ſoil and climate they ought to be reared; for I cannot at preſent admit, that they alone are the favourites of nature, and that the particular forms and qualities which ſhe has given to the different breeds of every animal, as well as ſheep, to ſuit their local ſituations, were not given for wiſe and uſeful purpoſes. It is obvious, that in making this experiment, it would not be a fair trial, to bring the black-faced or Cheviot breed, directly from the mountains, and confine them to paſture in the encloſure: it is as impoſſible that ſuch ſheep could thrive as well there as the new Leiceſters, as to ſuppoſe, that this laſt would thrive as well, if carried to the mountains, as the native breeds of theſe regions. The mountain ſheep in the encloſure, would be in the ſituation of a wild buck in a cage; they would neglect their paſture, and pant after liberty on their native mountains; for ſuch is the effects of habit, that even man, with all his ſuperior intellectual powers, cannot reſiſt, and muſt bend to its force. Whilſt, on the other hand, the New-Leiceſter, crammed like a ſtuffed turkey by the hand of man from the day it was dropped, and brought up in the lap of plenty; if left to ſhift for itſelf upon the mountains, it would die for want of energy to procure food; a virtue, the offspring of neceſſity, which can only be reared, and brought to perfection, by rigid diſcipline, in the ſchool of adverſity. In order, therefore, that the comparative trial of the different breeds may be fair, the two kinds compared, ſhould always be bred in the ſame paſture, and inured to the ſame food and habits of life, as mentioned above. I know from experience, that black-faced lambs or hogs brought from the mountains, do not thrive ſo well in an encloſure, particularly upon turnips, as the white-faced or Engliſh breed; the former like every other wild animal, being conſtantly in motion, and endeavouring to eſcape; whilſt the more judicious amuſement which the Engliſh ſheep took was, like honeſt John Bull, quietly to fill their bellies. But this was only the effect of early habits; for the Engliſh lambs, gorged from the day of their birth with the readieſt food, had been taught by their dams to eat the turnip, and had lain at their eaſe when their mothers fed, or paſtured around them; whilſt the mountain lambs, every day ſince they were dropped, had been conſtantly in the practice of ranging about with

theirs, in queſt of a ſcanty and precarious ſuſtenance. From an imperfect experiment I made this ſeaſon, I am the more inclined to call in queſtion the ſuperior excellence of the New-Leiceſter, or large Engliſh ſheep, over the black-faced, or other ſmaller ones. On the 14th of May laſt, I weighed ſix white-faced or Engliſh hogs, of a croſs betwixt the new-Leiceſter and Cheviot breed, purchaſed laſt year at St Boſwell's fair, and ſix black-faced hogs, from the mountains in Perthſhire, purchaſed ſome weeks after; the ſix Engliſh hogs weighed 42 ſt. Edinburgh fleſh weight, or 6 cwt. 2 qrs. 2 lib. avoirdupois; the ſix black-faced 34 ſt. 15 lib. fleſh weight, or 4 cwt. 1 qr. 9 lib. avoirdupois. On their being weighed again, on the 31ſt of June, the Engliſh hogs weighed 50 ſt. 7 lib.; increaſe 8 ſt. 7 lib. or 1 cwt. 1 qr. 7 lib. over live weight: The black-faced 44 ſt. 6 lib.; increaſe 9 ſt. 7 lib. or 1 cwt. 1 qr. 24 lib.; difference in favour of the black-faced hogs, 1 ſt. or 17½ lib. avoirdupois. From the above ſtatement, it appears, that the balance was in favour of the black-faced mountain ſheep, even under unfavourable circumſtances, as they had not forgot their wandering habit of life. I do not mean, however, to hold out this experiment as by any means concluſive, having neither been begun in time, nor carried to the proper length, for forming a correct opinion; but it muſt raiſe doubts in an inquiring mind, if the pretended great ſuperiority of the New-Leiceſter, or other large breeds, over the ſmaller ones, in producing mutton, has any foundation in truth, to ſanction the extravagant prices demanded for them; but that truth is only to be come at, by many and repeated comparative trials, which I warmly recommend to be made by diſintereſted perſons, in various ſituations; the reſult of which, I wiſh to ſee from time to time inſerted in your Magazine. It is ſaid, that the New-Leiceſters come to perfection at an earlier age than the other breeds; but ſome of the black-faced ſheep above mentioned, that were rejected by the butcher in the month of July, on account of the ſmallneſs of their ſize, have been killed this month (September) for family uſe, and contained of tallow (kidney fat included) 11 lib. Dutch, being exactly the weight of the quarter.

The delicacy of butcher meat and other animal food, principally depends on the fineneſs of the muſcular fibre, and this again, on the ſmallneſs of the animal; whether black or white-faced, Scotch or Engliſh; and will always be in proportion to the bone, and *natural* ſize of the animal; otherwiſe, it would be an incongruous offſpring of nature, and not in the fitteſt ſtate for ſupporting its exiſtence. Particular individuals may differ from this rule; but every breed, or claſs of animals, will be found to agree with it in general. The delicacy of the fleſh, combined with the ſmallneſs of the bone and fineneſs of the muſcular fibre, is eminently conſpicuous in the fleſh of a ſmall Highland ſtot, when compared with

with that of a large Engliſh ox. Travelling or exerciſe can never improve the fleſh of any of the domeſticated animals, but muſt make it worſe, by increaſing the ſtrength of the muſcular fibre: hence the fleſh of wild animals is always tough, hard, and dry; and the fleſh of the domeſticated animals will always be found the moſt delicate eating, when they are fattened on the richeſt paſtures, where they lye at their eaſe, as Milton deſcribes the cattle in paradiſe,

——— 'On the graſs
Couch'd, and now filled with paſture gazing fat.'

It may alſo be added, that the fleſh of the female of every animal is more delicate eating than that of the male, their muſcular fibres not being ſo ſtrong, even as the male when caſtrated at an early period; and on that account, they are alſo eaſier fattened. The popular predilection for wedder mutton, ſeems therefore, amongſt many others, to be a popular error.

I have no predilection for black-faced ſheep, otherwiſe than on account of their ſmall ſize; and prefer ſmall animals of any breed, not only on account of their being more delicate eating, but becauſe I think they are fattened at leſs expence, that is to ſay, that they will increaſe more in weight, in proportion to the food they eat, than the larger animal: And my reaſons for thinking ſo are, 1*ſt*, That the fine and leſs tenſe fibres of the ſmall animal more eaſily expand, and allow the internal veſicles interſperſed through the fleſh, to be filled with fat, and other animal juices, in the proceſs of feeding, which renders it more marbled, juicy, and delicate eating, than that of larger animals; the muſcular fibres of thoſe being more rigid, reſiſt, in a greater degree, the entry of the fat and juices into the internal veſicles, which, added to the ſtrength of the fibre, occaſions the large animal to be more difficult to feed, and its fleſh coarſer, and leſs juicy and palatable, than that of ſmall ones: 2*dly*, The greateſt increaſe of weight in the proceſs of fattening, is laid on upon the ſurface. Now it is obvious, to mathematical demonſtration, and conſequently may, with ſome propriety, be received as an axiom, that the ſurface of ſmall animals is much larger, in proportion to their weight or ſize, than the ſurface of large ones. Therefore, for both theſe reaſons, the fitneſs of the ſmall animal to fatten and increaſe in weight, is much greater than in the large one; and if that is the caſe, the additional weight will be laid upon the ſmall animal, with leſs expenditure of food. I frankly however confeſs, that this opinion is in a great meaſure founded upon theory, having never proved it by facts myſelf; but I think it has been ſupported, in many inſtances, from the aſtoniſhing increaſe of weight to which ſmall Highland cattle have frequently been brought. I believe it has been proved, by pretty accurate experiments,

experiments, that cattle eat in proportion to their weight; at leaſt I knew an inſtance of it ſeveral years ago, when two large oxen, equal in weight in the quarters to four ſmall ones, ate regularly the ſame weight of turnips and hay whilſt feeding.

I have been told, by a farmer who frequents Morpeth market, that in that great emporium, he can ſell ſheep, of the weight of 15 lib. per quarter, at one penny per pound dearer than he can ſheep of 25 lib. per quarter. If this is a fact, does it not account for the butchers in Newcaſtle, Manchester, Leeds, Sheffield, Birmingham, &c. &c. &c. ſelling two quarters of the New Leiceſters for one of the black-faced? The reaſon is obvious; they cannot give the coalheavers, keelmen, pitmen, miners, and fabricators, ſo good a pennyworth of the one as of the other, ſeeing they purchaſe them ſo much dearer themſelves. The caſe is exactly ſimilar in Dalkeith market. The fact, therefore, which the maſter in the buſineſs of ſheep-breeding has brought forward in ſupport of his arguments, militates againſt them, and the concluſion he draws; and I have not a doubt, but that, in the progreſs of luxury, every perſon, from Cornwall ſouthward, to Caithneſs northward, will in time learn to deſpiſe the large, coarſe, oleaginous mutton, and give a decided preference to the delicate fleſh of the ſmaller ones.

The breeder of coalheavers' mutton informs us, that, 'when hungry from the plough, he has often dipped toaſted bread into the drippings of his delicious mutton, and then ate the bread with pleaſure and avidity.' What will not people do when they are hungry! I have heard of them eating the ſoles off their ſhoes; and I can tell him, that the Ruſſian ſailors, when in this country, uſed often to climb the lamp-poſts, and dip their bread into the rancid train oil of the lamp, and then eat the bread with pleaſure and avidity. Ben Johnſon, the poet, uſed to remark, that his wit and genius were improven by good wine; and obſerved, that he always produced his beſt dramatic ſcenes whenever a but of ſack of the beſt quality was tapped. I am however afraid, that the ſop in the pan has been too heavy for the breeder of coalheaver mutton's ſtomach, and has hurt his reaſoning faculties; learned doctors telling us, that all diſorders in the head proceed from the ſtomach; for I cannot account for the paragraph which immediately follows, on any other principle. He ſays—'Epicurus muſt allow me to put him right alſo in one other article: *Mr Brodie never did feed what was known by the name of houſe lamb.*' What is the meaning of this? Was the writer labouring under the effects of the ſop in the pan, or has he never read the remarks on the modern improvement of farm ſtock, any more than he did the paragraph which gave riſe to it, which was expreſsly

expreſsly written to undeceive the public, by ſhowing that Mr Brodie never did feed what is called houſe lamb, and even that none ſuch were ever fed in Scotland for ſale, but in one year? Did I not expreſsly ſay, that Mr Brodie, ſome time ago, bred *early lamb* for ſupplying the Edinburgh market? How, therefore, can he put me right on a point which I had expreſsly admitted? He further adds, '*that Mr Brodie, by ſome means beſt known to himſelf, had the addreſs* to make the ewes of this very breed take the tup at a very early ſeaſon, ſo as to bring the earlieſt lambs to the Edinburgh market, of any perſon in that vicinity at that period; and I have been informed, that he ſold theſe lambs, to the amount of a hundred, at twenty ſhillings, or one guinea each. Now, Epicurus talks of theſe lambs of Mr Brodie's weighing only 2½ or 3 lib. per quarter,' &c. I muſt here inform him, that the purchaſers of early lamb in the Edinburgh market are ladies and gentlemen, who enjoy, in that elegant city, their *otium cum dignitate*—or lawyers, who do not require a ſop in the pan to refreſh them after hard labour. They therefore prefer delicate early lamb, of a ſmall ſize, which is ſerved up cold at ſupper; and on that account, it is believed, I will be found pretty correct with reſpect to the ſize of Mr Brodie's early lamb. But if any doubt remains with him, let him conſult the Edinburgh butchers, who will inform him as to the weight and fat of Mr Brodie's early lamb, when compared with what is now brought to market from other places. Your correſpondent judges it was motives of prudence that made Mr Brodie give up the rearing of early lamb. I am of the ſame opinion. Probably his farm of Upper Keith, although of a dry ſoil and warm expoſure, is ſituated at too great a diſtance from the ſea, for raiſing a bellyful of rich paſture graſs, always ſo neceſſary for the New-Leiceſters, particularly when fattening their lamb.

Mr Brodie, according to your correſpondent's account, 'by ſome means beſt known to himſelf, had the addreſs of making his ſheep, which are ſometimes tardy at procreating, take the tup at a very early ſeaſon. This is a moſt important diſcovery: why does he conceal his light under a buſhel, or hide his talents in a napkin? If Mr Brodie does not chuſe that his country ſhould ſtand indebted to him for a free diſcovery of this valuable ſecret, let him boldly go to the Houſe of Commons, and demand a *bonus* for his ſecret, out of the public purſe. It is certainly of ten times more value than Elkington's mode of draining; and he will undoubtedly be ſupported in his demand by a formidable band of patriots, on both ſides of the Houſe, who now ſhew their regard for their country, by reforming farm ſtock. A reſpectable author on agri-

culture

culture informs us, that when the good women in the Highlands want to make their cows take the bull, they lead them out to crop a certain herb called bulling-graſs, which has the effect of making them take the bull immediately. Perhaps this rare graſs has been diſcovered upon the farm of Upper Keith; and, if ſo, it is to be hoped that ſome of it will be brought to market, for the good of the public. As to what the maſter in ſheep-breeding ſays, reſpecting the wool of the Leiceſter breed being more valuable than the Ryeland, the fineſt in the iſland; I will by no means diſpute the point, becauſe I am not a competent judge of the matter; only I muſt add, that what he advances on that head, is by no means ſatisfactory, at leaſt to me. He ſays, *that, formerly,* many of the breeders of the long, or heavy-wooled Lincolnſhire breed, clipped twelve pounds per fleece over their whole flock, which they ſold for 1s. per lib., or 12s. per fleece; whereas the Ryeland only averages 3 lib., which ſells at 3s., or 9s. per fleece. From which he leaves the reader to infer, that it is more profitable rearing long, than ſhort wool. But the fallacy of this argument will appear evident, when it is known, that he is comparing the largeſt breed of ſheep in England (and even that not the New-Leiceſters, whoſe merits he is defending), with the ſmalleſt, perhaps not half the weight of the large Lincolnſhire breed; and if ſheep eat in proportion to their weight, which is highly probable, the fine ſhort-woolled kind will have a decided preference; as an acre of ſheep paſture will then produce more money, in ſhort, than long wool; the only criterion by which a juſt compariſon can be drawn.

We are alſo informed, that the New-Leiceſters are creeping *ſlowly* up the hills of Scotland. I know, by actual experience, from the great quantity of fat they carry on their backs, that they will creep ſlowly, indeed, up hill; and I ſhrewdly ſuſpect, that in their progreſs upwards, or at leaſt before they are domeſticated in theſe regions, they will leave their outward coat of fat behind them, together with the tallow in their bellies, the pride and boaſt of their breeder. Before I have done with this gentleman, I muſt add, that in the outſet of his paper, he undertook to prove, that the New-Leiceſter breed, producing two pounds of mutton, where one was produced before, was much wanted in Scotland; and that much praiſe was due to Mr Brodie, for introducing that valuable breed into this country. But I have ſhewn, that in place of proofs, he has only brought aſſertions, without a ſingle fact to ſupport them; and that however valuable this breed may be, *Mr Brodie at Upper Keith was not the perſon who introduced it into Scotland.*

Before I conclude, I beg leave to ſay a few words to your correſpondent F. E.; whoſe arguments are ſo obſcure, being delivered

delivered in a ſort of parables, that I confeſs I do not underſtand them. What does he mean by this apothegm? 'A certain author wrote a book, and after much trouble and expence in the publiſhing it, he could find nobody that would buy it,' &c. What is all this to the queſtion at iſſue? to me it is inexplicable. As to being unfortunate in the choice of hog mutton, I never aſſerted that it was good eating. I only adduced the fact, to ſhew, that young ſheep, of other breeds than the New-Leiceſters, if well fed, would die as well as they: nor did I ever diſpute, but that there was much pleaſure to be procured under a blanket or a petticoat; I only inſiſt, that the wool of the New-Leiceſters, of which theſe articles are made, is not near ſo fine or valuable as the ſhort clothing wool, which ſells for more money; and, from the preſent ſtate of Europe, muſt every day become more and more valuable; and renders the extenſion and improvement of the ſhort-woolled ſheep abſolutely neceſſary for preſerving the woollen manufacture of England. Your correſpondent is ſo dull, ignorant, or affected, that he does not know my motive for writing the obſervations on the modern improvement of farm ſtock. I muſt therefore tell him, that it was to detect the fraud, and expoſe the folly of the perſon, who inſerted the abſurd paragraph in the Edinburgh newſpapers, holding up Mr Brodie to the public eye as an object of praiſe and admiration, for benefiting the Edinburgh markets with his houſe lamb and coarſe mutton, when, in fact, he did not deſerve it; but this your correſpondent attributes to the envy of a little mind. I may ſurely here ſafely apply to him the precept of the great maſter in morals: '*Why beholdeſt thou the mote that is in thy brother's eye, but conſidereſt not the beam that is in thine own eye? for with what judgment ye judge, ye ſhall be judged, and with what meaſure ye mete, it ſhall be meaſured to you again.*' I ſhall therefore be bold to tell him, that the envy of a little mind proceeds from vanity, the offspring of ignorance, combined with affectation, of which he has pled guilty. Of this, nothing can be more ſtriking, than from my having had occaſion to mention a name, for the purpoſe of ſubſtantiating a fact, and his laying hold of this circumſtance, to hold up Mr Brodie as a man of fortune, who has ariſen to opulence; and, in ſo doing, he has been odious enough to draw compariſons betwixt them, and has even made the other ſuffer (in his opinion), becauſe he is not ſo rich as Mr Brodie. If this is not the effect of vanity, fermenting on the dregs of a little, ſordid, groveling mind, I do not know what it is. I muſt therefore look upon him as the officious friend of Mr Brodie, who inſerted the paragraph in the Edinburgh newſpapers, probably without his knowledge or conſent; and certainly that gentleman was very

very little obliged to him for his officious interference in this buſineſs. There was certainly no occaſion for obtruding him upon the public. His actual merit, as a ſpirited farmer, is well eſtabliſhed, and for which he ſhall always be juſtly appreciated by Yours, &c.

EPICURUS.

NOTE BY THE CONDUCTOR.

Reſpect for our old friend *Epicurus*, with whom we have been long connected, engages us to preſent the above paper *verbatim*, in ſo far as our management is implicated. Perhaps ſome of his remarks might have been ſpared; but, being made, a juſtificatory plea is neceſſary. We are not afraid of the diſcuſſion, though aware it can afford little pleaſure on either ſide. On that account, we ſhall be conciſe.

The practice adopted by us, of occaſionally offering remarks on the communications of correſpondents, was early recommended by a reſpectable friend, as being the alone beſt method of maintaining the congruity of the work. Beſides, it occurred, that the diſtance betwixt each publication, rendered remarks particularly neceſſary, in the firſt inſtance, otherwiſe the ſubject might, in a great meaſure, be forgotten before the ſucceeding Number was publiſhed. In making remarks, we are juſtified by the *Muſeum Ruſticum*, an agricultural work, publiſhed in London about thirty-ſeven years ago, and even by the practice of many cotemporary editors. But why ſhould we appeal to any authority at all, ſeeing that the ſtrongeſt ſupport may be drawn from the very paper before us. Our worthy correſpondent quotes a paſſage from Mr Dempſter's letter, which is much to our mind; and here we reſt our juſtification. If the ſparks from the colliſion of argument light up the torch of truth, and lead the inquirer to the tree of knowledge, then every additional remark or argument that is made muſt tend to promote theſe ends. The remarks in queſtion have procured three or four additional pages from Epicurus; and had the one been avoided, it is more than probable that the information communicated in the other would have been loſt to the public.

Having noticed our correſpondent's exordium, the criticiſms offered by him call next for our attention. Whether he is a fair critic, and whether he confounds one part of a diſpute with another altogether unconnected with the former, we are not bound to ſay. He is keen, and perhaps, in ſome inſtances, ſteps beyond his object. In his eagerneſs to procure good mutton and good cloth, he perhaps forgets that none of theſe are great objects to the farmer who muſt keep term-time. Such muſt conſider whether

whether this breed or that breed of ſheep will pay him beſt for a given quantity of food, and not which will yield the greateſt reliſh to his palate, or the ſofteſt clothing to his back.

Epicurus's firſt letter ſeemed to embrace two objects: 1ſt, To detect the fallacy of the paragraph inſerted in the Edinburgh newſpapers; and, 2dly, To depretiate the New-Leiceſter, or, what is commonly called the improved breed of ſheep. In our remarks upon that letter, we virtually joined him in his firſt object, at leaſt ſo far as reſpected the matter of houſe lamb; and, with reſpect to the ſecond, *i. e.* the merit or value of the New-Leiceſter breed of ſheep, we remarked, that he had not conſidered the ſubject in a true point of view, that is to ſay, his arguments were ſolely directed to the quality of their fleſh, not to the profit and loſs ariſing from the breed. This is the ſum and ſubſtance of the diſpute, ſo far as we interfered; and let any impartial perſon examine his paper, and the attendant remarks, and ſay, whether the latter are not ſtrictly applicable. If the paper had been confined to the paragraph in the newſpapers, Epicurus would have been perfectly right, when he ſays that he had nothing to do with profit and loſs; but the remark made by us applied to another part, in which profit and loſs was materially concerned.

Whether the compliment we paid to the author of the letter ſigned '*A Breeder of Coalheavers' Mutton*,' be juſt or not, we muſt leave to be determined by thoſe who are acquainted with the merits of that reſpectable gentleman. This, however, and the remark which followed, *viz.* that it might almoſt be received as an axiom, that, in general caſes, the New-Leiceſter, or improved breed of ſheep, are more profitable to the farmer than many other breeds, forms the eſſence of his ſecond criticiſm. We are therein accuſed of acting didactically, dogmatically, and, in ſhort, of giving opinions altogether unſupported by proof. We did not know before, that giving a ſimple opinion was acting didactically, and are yet to learn, that didactic and dogmatic are ſynonymous terms. But be theſe things as they may, we muſt be allowed to think, that the rapid ſpread of the New-Leiceſter over a great part of the iſland, is a ſtrong proof of their intrinſic and ſuperior quality as feeders. We do not ſay that the extenſion of the breed warrants us to lay down as an axiom, that they are the beſt breed; but it certainly juſtifies the opinion given, that, in general caſes, they will prove more profitable to the farmer than many others. Does Epicurus mean to maintain, that every animal feeds or fattens in direct proportion to the food it conſumes? If he does, we might uſe the *argumentum ad hominem* in return, were we not averſe to making an application.

With regard to the mode of aſcertaining the value of different breeds, we can have no objection to what is ſuggeſted by Epicurus,

rus, and are of opinion, that few people are better qualified to conduct ſuch trials than himſelf. Local circumſtances, with him, are favourable to ſuch comparative inveſtigations, and we are ſatisfied with his accuracy. Beſides, he ſhould remember, that the *onus probandi* lies upon his ſhoulders, and not upon the gentlemen who have defended the New-Leiceſter, or improved breed of ſheep.

If Epicurus's friend, who has made a comparative trial of oxen and horſes in farm labour, will favour the public with the reſult of his experiments, through the channel of our Magazine, we promiſe, that he ſhall paſs the ordeal without a touch from our ſword, though we will not engage for our correſpondents. Why need the gentleman be afraid? If the comparative trial is accurate; if it is fairly detailed; and if his concluſions are juſtly drawn, he may ſafely come forward; and we may add, that if he annexes his name, the communication cannot fail to have weight with an impartial public. N.

TO THE CONDUCTOR OF THE FARMER'S MAGAZINE.

An Anſwer to Obſervations on Tithes, No. XIII. p. 61—76.

SIR,

IN your 13th Number, *A Friend to Improvements* obſerves, that 'you did right in giving a place' to a paper of mine on tithes, in the preceding one, 'as it ſerved to diſplay the weakneſs of the cauſe.' I thank you for that indulgence, and venture to preſume on a repetition of the favour, even though your compliance ſhould afford him additional matter for expoſing the weakneſs of my arguments. You happened, however, to give my obſervations an improper title. Inſtead of *defending* tithes, I allowed the exaction of them to be unfavourable to improvements in agriculture, to be often vexatious and oppreſſive to occupiers of land, and attended with odium, trouble, and loſs, to the exactors. Thus far the gentleman and I agree; and, conſequently, we muſt agree concerning the propriety of getting rid of them in a fair and equitable way, if ſuch a way can be found.

Two points, chiefly, are at iſſue between us—the nature of the right by which tithes are held, and the extent of the evil ariſing from them. To theſe two, all other ſubjects of difference in our opinion are reducible.

He ſeems to conſider tithes, not as a real eſtate, but as a tax upon an eſtate, which, like all other taxes, may be commuted at the pleaſure of the Legiſlature, when the public good requires it, with

with or without the conſent of the holders: whereas, I look upon them to be a ſacred, unalienable right, held by the ſame, or at leaſt as ſtrong a tenure, as the lands out of which they are drawn, and liable to be affected by any act of the Legiſlature, juſt as land is affected, and no farther. The Britiſh conſtitution can no more authoriſe all the tithes to be ſold or commuted than it can authoriſe all the land in the kingdom to be ſold or commuted *. For the ſoundneſs of this doctrine, I refer your correſpondent to any lawyer of reputation in the ſiſter kingdoms.

The

* It was in illuſtrating this part of the ſubject, that I introduced *pleaſure grounds* and *bad farming*. Your correſpondent aſks, 'What analogy is there between theſe matters and tithes?' With ſubmiſſion to him, there is an evident and ſtriking 'analogy between theſe matters' and the argument they were intended to elucidate. For if the reaſon for aboliſhing or commuting tithes be, that the proſperity of agriculture requires it; then, for the ſame reaſon, pleaſure grounds ought to be occaſionally in tillage, and bad farmers turned out of their poſſeſſions—not 'compelled to be good ones;' language neither uſed by me, nor to be fairly inferred from any thing I advanced. I humbly apprehend, that this meaſure, ſubjecting pleaſure grounds, and land improperly managed, to a regular rotation of crops, according to the acknowledged rules of good huſbandry, would be of more eſſential ſervice to the intereſt of agriculture, than getting free from tithes. And I alſo apprehend, (though here I ſpeak under correction), that a Britiſh Parliament can, by its inherent power, enforce the former without conſulting thoſe concerned, but cannot touch the latter. I ſhould indeed be heartily ſorry to ſee this inherent power enforcing ſuch an arbitrary meaſure; for I agree with your correſpondent in thinking, that every gentleman is entitled to manage his pleaſure ground, and every tenant his farm, in the manner that appears moſt profitable, or even moſt agreeable, to themſelves; and that both are ſufficiently puniſhed in being diſappointed of their expected object. But the queſtion ſtill recurs—Why ſhould tithe-holders be under a compulſion, for the ſake of agriculture, from which others are exempted, in a caſe where agriculture is equally concerned? I do not urge the tillage of pleaſure grounds, or the ejection of bad farmers; I only contend, that theſe are more eaſily effected than the commutation of tithes, and fully as beneficial to agriculture; and that, from regard to conſiſtency, the advocates for the one ſhould be equally zealous for the other.

N. B.—It may be proper to mention here, that, ſince the above was written (with a view of being inſerted in No. 14.), a new opponent has ariſen in that Number, under the ſignature of W., to whoſe long reaſoning about *right*, what is ſaid in the text, and in this note, may be conſidered as a ſufficient anſwer. I would beg of that gentleman

The inſtances which he produces, of legal interference with private property, are not quite to the purpoſe. It is well known, that tithes in North Britain were not commuted; nor are they, ſtrictly ſpeaking, commuted at this day. At the Reformation, they were wreſted from the Church, or rather tacitly given up by her in the phrenzy of fanaticiſm. By the Crown, who thus got hold of them, they were profuſely beſtowed on people of influence, reſumed and alienated a ſecond time, with liberty to proprietors of land to bring them to a valuation and ſale, under the burden of providing for the reformed clergy. Theſe uſurpations, grants, and regulations of the Crown, were afterwards ratified by Parliament. But the proceedings, both of the King and Parliament, bear evident marks of having been influenced by the turbulent ſpirit of the times. And, ſurely, a meaſure originating in the uſurpation of the Prince, and carried on by his arbitrary deciſion, though afterwards adopted by Parliament, cannot be recommended as a precedent for the abolition of tithes in South Britain, in the preſent ſettled ſtate of government, when property of every kind is clearly defined and protected by law. The juriſdiction act is rather more in point; yet it only took away privileges, incompatible with the order and ſafety of the community, with the profeſſed or implied conſent of ſome poſſeſſors, though under a violent oppoſition from others; part of whom certainly were actuated by the principle of family pride to retain hereditary honours, while the other, and perhaps the greater

not to carry me farther back than I go myſelf, and that is only to the law of England, as it has been for ages, and is now, reſpecting tithes. By that law, they are held and conveyed juſt as eſtates are. The *barter*, *title-deed*, or whatever name it legally obtains, which gives the proprietor a right to the lands, contains the titular's right to the tithes. If, in any inſtance, lands are held by preſcriptive, not by written rights, ſo are the tythes drawn from them, whether by laymen or clergy. And where two properties belong to two individuals or bodies by the ſame common right, there is equal injuſtice in compelling a ſale or commutation of the leſſer as of the greater. When he aſks—'what right the Church has to be ſubſiſted by the landed intereſt alone?' he forgets that the queſtion relates to tithes, not to the ſubſiſtence of the Church, and would not be in the leaſt affected though none of them went to ſubſiſt her members. With regard to the Iriſh union, I apprehend it was accompliſhed agreeably to the wiſhes of a vaſt majority, in both kingdoms, of thoſe who had a legal intereſt in it; and ſo will tithes be commuted, when a majority of thoſe intereſted in the commutation ſhall agree upon it. At leaſt, I have always underſtood, that all acts of the Legiſlature, interfering with private property, were paſſed with the conſent, often upon the application, of a majority of the people concerned.

greater part, had nothing elſe in view, but to enhance the price of what ſound policy required them to relinquiſh. With regard to the taxes on tea and coals, converted into one on windows and another on ſpirits, all canal, road, and harbour bills, they proceed upon the undeniable principle, that ſubjects muſt ſurrender *part* of their property for the ſecurity and improvement of the remainder, and that the Legiſlature is the competent judge of the part to be thus ſurrendered. But the commutation of tithes would be a ſurrender, not of a *part*, but of the *whole* of a property, ſo valuable, as to amount, according to your correſpondent, to one ſixteenth of the rental of the country, and to much more *, according to my conjecture. Now, ſuppoſing tithes to be *property* in his ſenſe of the word, as annuities and wages are, or as any lucrative tax is, and ſubject, like them, to be modified and altered by the Legiſlature, would he not think it rather an unprecedented and unconſtitutional ſtretch of power in a Britiſh Parliament, to enforce an exchange, even of ſuch property, to the extent of three millions yearly, without previouſly obtaining the conſent of the parties intereſted? However much we may differ on other points, I flatter myſelf, that neither he, nor any lover of his country, would adviſe ſuch an important meaſure to be puſhed forward, contrary to the wiſhes of either the purchaſers or the ſellers. He ſurely muſt be ſenſible, that not merely their concurrence, but their cordial co-operation, is neceſſary to carry it into effect; and that remonſtrances from all the farmers and grand juries in the kingdom, would not be liſtened to, till they unite in an application, and fix upon the general outlines of the commutation. Of all this he ſeems himſelf to be abundantly aware, as far as one can judge from the plan which he ſuggeſts and illuſtrates. Are we then agreed concerning the neceſſity of prevailing with tithe-holders and land-holders, not to conſent paſſively to a commutation, but to enter zealouſly into an amicable adjuſtment of the terms on which it ſhould take place? This is the radical principle for which I con-

* Suppoſing 48 millions, as he computes, to be the annual rental of England, and one fourth part of the land to be *tithe-free*, or nearly ſo; by paying only a very ſmall modus, the remaining three fourths would yield 36 millions of rent, one fifth of which, according to the principle of valuing tithes in Scotland, amounting to more than ſeven millions, would be the tithe; but, on account of the circumſtances which he and I have mentioned, deductions ſhould be allowed to reduce it to one eighth, or 4½ millions. The gentleman may be right as to the real value of tithes actually drawn; but, in commuting them, a fair eſtimate muſt be made of their probable amount, as the baſis of the commutation.

tend. Nor does your correſpondent diſpute it, though he does not lay ſo much ſtreſs upon it as it deſerves.

There is no material difference in our opinions concerning the means of perſuading theſe parties to a cordial agreement on the ſubject. For I have the ſatisfaction to perceive, that, while he ſneers at me for laying it down as a maxim, 'that all men of good ſenſe are guided by worldly intereſt,' (and that maxim I certainly maintain with reſpect to all temporal concerns), he appeals himſelf to this very principle in ſupport of his plan, and recommends it as beneficial to the public, to landholders, to tytheholders, and farmers. I am happy that he virtually ſubſcribes to my creed; and am confident, that, ſo far (and ſo far only) as his plan and his arguments are calculated to work on theſe deſcriptions of men, he may be inſtrumental in accompliſhing the deſired change. On the reſt of the public, his reaſoning and his eloquence are abſolutely thrown away. Not that theſe are unable to underſtand them and be convinced, but that their conviction can neither convince thoſe concerned in the ſale and purchaſe of tithes, nor compel them to ſell and buy without conviction. Here it is, that thoſe formidable obſtacles lye in the way, which I am accuſed of *ſtarting*. I mentioned ſome circumſtances, which naturally diſpoſe the one party to ſet too high, and the other too low, a value on tithes, and which could only be done away by farmers coming forward with ſuch liberal offers of additional rent, as would enable the landholders to ſatisfy the titheholders, and to put ſomething in their own pockets. This difficulty is increaſed in proportion as waſte lands and old paſtures can be rendered productive by tillage. Were titheholders to bear a ſhare of the expence incurred in ſuch improvements; to avoid it, they might take leſs for their tithes. But being liable to no ſuch expence, and yet entitled to a proportion of the produce ariſing from that expence, they have a right to ſet a high price upon their tithes, and to ſay, 'If they be worth that price, pay it; and though they ſhould not be worth ſo much to you proprietors, yet if they be worth it to you and the public jointly, let each pay a part.' I would not commend their patriotiſm in acting thus. I ſpeak only of their *right*. And wherever men have a right, it muſt be made their intereſt to part with it. If they demand too much, nobody will purchaſe, though buyers will rather ſtretch a point for ſuch an important article as the tithes of their own lands. But if theſe cannot be bought ſo as to afford a reaſonable profit to landlords and farmers, improvements muſt either ſtop, or be carried on under the burden of their exaction. Your correſpondent cannot be ignorant, that, under this burden, large tracts have been ſubſtantially

tially improven, very much to the honour and emolument of farmers, and that other tracts, in favourable situations, admit of equal improvement under the same burden. At the same time, I frankly allow, that there are extensive districts, where the exaction would effectually preclude any attempt at melioration, or at least render it extremely doubtful how far farmers of skill and enterprise should venture upon them. These facts, while representing tithes as decidedly hostile to agriculture, show how very difficult, if not impracticable, it is to fall upon a general rule for their commutation, which would apply, with equal fairness, to every case, and meet the ideas of all concerned. From the general strain of his letter and his plan, your correspondent is not insensible of this difficulty, though he seems not to see it in so striking a point of view as I do.

But there are other facts (especially two very glaring ones, instanced in my former letter), which furnish a strong presumption, that tithes, though an acknowledged grievance, are not a grievance of such magnitude and extent as their enemies represent. One of these your correspondent passes over in silence, though he gives me a piece of information concerning it, which strengthens my inference: 'Lay-tithes, it is believed from good authority, extend to a fourth part of the English territory.' To the sale or commutation of such tithes, there is no legal obstruction. Yet few of them have been bought or commuted. Whence has this happened? Why propose 'an act of the Legislature,' for the commutation of this 'obnoxious burden,' this 'pernicious and unpopular tax,' when one fourth part of it, which may be commuted without such an act, remains in the hands of lay-impropriators? Till these simple questions are answered in a satisfactory manner; to warrant a contrary inference, I must continue to infer, as I have done, that lay-tithes, at least, are not an *evil of great magnitude*. Yet he tells us, 'these are worse than tithes paid to clergymen.' By his own account, the latter must be an *evil of still less magnitude*. That neither the one kind, nor the other, are an evil of such extensive and deplorable magnitude, as to call for legal interposition, my second fact (which he vainly tries to explain away) establishes beyond a doubt. For, in that case, all parties concerned would have been *cordial and unanimous* in desiring a commutation. The attempts hitherto made have been slight, and proceeded from one side. *Tithe-holders* have never stirred in the business. While they and the great mass of the *oppressed tithe-payers* remain uninfluenced by the marked 'reprobation of seven eighths of those gentlemen who were employed by the Board of Agriculture in surveying the kingdom,' must we not conclude, either that the evil is not sore, or that the peo-

ple are ſo ſtupid and inſenſible, as not to feel it?'* If their weighty authority did not inform and convince me, 'relative to the diſagreeable ſituation of thoſe placed under the tithing ſyſtem,' in oppoſition to this incontrovertible fact, what information or conviction could he expect me to obtain from the 'letter of his friend in England?' Let me aſk him, if he ſeriouſly believes the deſcription there given to be generally applicable to every part of the kingdom where tithes are drawn? Does he believe that all, or moſt, or even many tithe-owners, act in ſuch an oppreſſive manner? Does he believe that one tithe-owner out of 5, of 10, of 20, or even out of 100, act ſo? For my part, I muſt believe inſtances of ſuch conduct to be extremely rare; becauſe, were they either general or frequent, they would excite greater exertions to get rid of tithes than have hitherto appeared. If he looks upon them in the ſame light, he might have ſpared himſelf the trouble of inſerting the letter; for it does not ſtrengthen his cauſe; it only proves, what in all caſes holds true, that there are exceptions to the general rule. If he can perſuade himſelf that ſuch inſtances are numerous, let him account for the feeble

* The prevalent uſe of horſes, rather than oxen, in ſpite of plauſible theories, is an apt illuſtration of this concluſion. Your correſpondent himſelf allows that 'it carries a ſpecious appearance.' It will be found to be as *ſolid* as it is ſpecious, when fairly applied to the caſe at iſſue. Farmers do not uſe oxen, *becauſe it is not for their intereſt.* Landlords do not purchaſe, or commute lay-tithes, *becauſe it is not for their intereſt.* Landlords and farmers have hitherto entered into no concert, or ſhewn any vigorous deſire to get church-tithes commuted, *becauſe it is not for their intereſt.* Tithe-owners have hitherto taken no ſteps to get an equivalent for tithes, *becauſe it is not for their intereſt.* I do not, however, puſh the argument to its full extent. I content myſelf with inferring, that though tithes be a grievance, they are a more tolerable one, than any plan hitherto propoſed for getting free from them. The illuſtration will not be applied, by a fair reaſoner, in any other ſenſe; and I ſubmit it to the candour of your correſpondent, if his application be the natural and juſt one. With regard to 'the common ſenſe of farmers,' I ſhould be ſorry if any thing, in my former or preſent letter, could be conſtrued into an inſinuation againſt it; and, as their tameneſs under the *vexatious* burden of tithes would be no proof of it, I infer from this tameneſs, that tithes are leſs vexatious than he is willing to allow. Mr W. indeed tells us, 'the diſapprobation of the people at large againſt them is become ſo ſtrong, that it muſt find utterance ſomewhere;' but he afterwards tells us, that, in all former inſtances, 'the eloquence of the clergy wrought on the ſympathy of the people; and that the landed intereſt quickly gave up the cauſe.' A concluſive proof, that tithes have been, and are ſeverely felt!

feeble impression which they make upon the public mind, and the general torpor that prevails with regard to the commutation of tithes. Let him not shelter himself under the old adage, that 'what belongs to every body, belongs to nobody;' or plead that tenants only suffer, as an apology for landlords being negligent; or lay stress on mere resolutions of Grand Juries, which ended in doing nothing. Did tenants, in general, suffer to one half the extent that he and his friend describe, their sufferings would force themselves on the notice of proprietors and the public, and imperiously and successfully call for redress.

This same letter must not be dismissed, without further animadversion. I cannot help regretting, that the writer has not specified some particular facts, from which we might have known, with certainty, how far he or his neighbours have really been aggrieved by the vexatious conduct of tithe-holders, and what proportion of their grievances has arisen from the laity and from the clergy: for information on these points seems absolutely necessary, to ascertain whether there be occasion for legal interposition, or whether relief can be obtained without it. If oppressive exactions be few and partial (as I apprehend for the reasons already assigned), individual sufferers should be left to make the best composition they can. If such exactions be general, to whom are they to be imputed? Not surely to lay-impropriators: for landlords have it in their power to remove them, by purchasing their tithes. If landlords will not employ this power, upon being suitably reimbursed, *they* are to blame. If tenants refuse such an additional rent, as will amount to a suitable reimbursement, *they* are to blame. Yet he tells us, 'the great tithes are generally in the hands of laymen;' and he enumerates 'corn' among the great tithes. Do laymen, then, prevent farmers from 'harvesting their corn, and depasturing their fields in proper time?' And do landlords tamely submit to a burden, from which they can be relieved on paying a fair compensation? Or are tenants backward in urging their landlords to give the compensation, and in offering something more than an annual equivalent for the value of it? Will your correspondent, or his English friend, who are so well acquainted with the subject, be so kind as to say where the blame lies? There may be instances, where, family pride, personal pique, or political differences, prevent lay-impropriators from disposing of tithes. But, in general, these considerations are easily overbalanced by self-interest. To that powerful principle, the oppressed will very seldom apply in vain. Where they do not apply, I dare say it must be allowed, that there can be no harm in tithe-holders using a right, however unfriendly to agriculture, which the very persons, most interested in the prosperity of agriculture, neglect, or decline to purchase.

As far as the clergy are implicated in his charge, this reaſoning will not apply. He ſeems to aſſert, not in a direct, but in an implied manner, that ſome of the greater, and moſt of the ſmaller tithes belong to them; and theſe cannot be commuted or purchaſed without an act of the Legiſlature. In a ſimilar manner, he ſeems to aſſert, that a deciſion, finding turnips titheable, except when eaten on the ground by ſheep paying tithe, has been inſiſted upon, 'on many occaſions,' with a rigour very injurious to the cultivators. With regard to lambs of an improved breed, he does not even *ſeem* to aſſert that they ever *were* demanded; he only inſinuates that they *may be* demanded in tithe. Let us, however, admit the charge in its full extent againſt the clergy. Let us admit, that, by their perverſeneſs, corn is injured, cattle are deprived of paſture, fields are kept back from being tilled and ſown; and that, through their greed, turnips and improved lambs are rigidly tithed, the queſtion ſtill recurs—is the practice univerſal? If it be, do not farmers calculate upon it when taking their farms, and offer leſs rent? And is not this circumſtance of itſelf ſufficient to rouſe proprietors to ſuch effectual meaſures, as ſhall inſure a legal commutation? For, in every caſe, the univerſality and preſſure of an evil is both the ſtrongeſt incitement, and the ſureſt prelude to a ſpeedy remedy. If, on the contrary, the practice be not univerſal, but confined to a few ſolitary inſtances, it is material to inquire, whether theſe be occaſioned by the avarice or ill-nature of the clergy; or by the artifices and fraudulent attempts of farmers to elude a fair and full payment; or, perhaps, partly by both theſe cauſes? This inquiry may be equally neceſſary with reſpect to oppreſſive exactions of tithes by laymen. Part of the blame will often be found imputable to farmers.—None of theſe conſiderations are taken into account by the letter-writer. He never ſuppoſes, that farmers draw down ſuch rigorous treatment on themſelves, or poſſeſs their farms ſo much cheaper for being ſubject to it. He never ſuppoſes, that tithe owners would willingly accept ſomething leſs than the fair value of their tithes, to be freed from the trouble and odium of receiving them in kind. He gives no hint that diſſenters are the chief ſufferers by the vexatious demands of the clergy, or, in the language of the clergy, are the moſt clamorous and troubleſome to deal with in the matter of tithes. Yet it is well known, and not foreign to the point, that the generality of them, with all their reſpectability and worth, are unfriendly to religious eſtabliſhments of any kind: they cannot be fond of paying tithes to ſupport what they diſlike: they are not, on that account, much in favour with the clergy: leſs indulgence is ſhown to them than to churchmen; and they are not likely to conceal or extenuate their wrongs. Setting aſide their complaints, not as groundleſs, but as the neceſſary

ceſſary effects, in ſome meaſure, of their own principles and conduct, the evils actually ariſing from the tithe ſyſtem will be reduced within a much narrower compaſs.

In caſe it ſhould be alleged, that though hardſhips be not ſuffered to any conſiderable extent from the preſent exaction of tithes, yet, as they may be ſeverely felt in a ſtate of higher agricultural improvement, and as the fear of their being thus felt prevents ſuch improvement, therefore the owners ſhould be compelled, by a poſitive law, to ſell or commute them for a reaſonable compenſation, I beg leave to add, that I am as ready as any of your readers or correſpondents, to adviſe and urge thoſe concerned to concert meaſures for obtaining ſuch a law; but that the *actual, ſore, and univerſal experience* of inconvenience and real miſchief ariſing from tithes will go farther to obtain it, than their own mere theoretical conviction of its neceſſity and utility, or the united opinions and ſolicitations of their fellow-citizens. More ſpeedy and vigorous meaſures are always taken to remove an evil that is *felt*, than one that is only *apprehended*.

I have now only to aſk pardon of you, and the public, for occupying ſo much of your Magazine, when it might have been more uſefully filled. Yet I am not conſcious, either in this, or my preceding paper, of introducing extraneous matter, or dwelling diffuſely on the topics illuſtrated. Nor am I conſcious of miſapprehending or miſtating the arguments of my opponents, or of treating them, in any reſpect, with unfairneſs or incivility. I am yet to learn that a cauſe can be ſerved by ſuch means, otherwiſe it were eaſy to employ them. I reſt my reaſoning on facts, either univerſally acknowledged, or furniſhed by your correſpondents themſelves. And I beg they will conſider, coolly and ſeriouſly, the contents of my former paper, their own animadverſions upon it, and the illuſtration of it now ſubmitted to their peruſal. Allow me to expreſs a wiſh, that ſhould they, or any other body, be inclined to offer any further remarks to the public on the ſubject, they will ſave themſelves the trouble of decrying tythes as inimical to agriculture, as that point is not diſputed, and confine themſelves to the atempt of overturning the facts on which I reaſon, or invalidating the arguments I deduce from them. I have no other deſire than to have my meaning clearly underſtood, my facts candidly inveſtigated, and my arguments narrowly, yet fairly ſifted. I am, &c. T. S.

June, 27th. 1803.

REMARKS ON THE ABOVE BY THE CONDUCTOR.

It appears to us that Mr T. S. has not underſtood the plan propoſed by the *Friend to Improvements* for regulating tithes, which

which removed, in a great meaſure, the objections urged by him and others againſt a commutation, or he would not have ſent us the above anſwers. If the points at iſſue are, *the nature of the right by which tithes are held*, and *the extent of the evil ariſing from them*, we ſhould ſuppoſe that the queſtion is compreſſed within narrow bounds. If tithes are an evil (and Mr T. S. admits that they are), then the nature of the right is but a ſecondary object, becauſe private right ought always to give place to public advantage. This is a principle fully recogniſed by our laws, and hath been acted upon in innumerable inſtances. We will not waſte time in detailing proofs, as the dulleſt of our readers muſt be ſufficiently acquainted with ſuch legal interferences.

Suppoſing, for argument's ſake, that lay-impropriators have as good a right to tithes, as landed proprietors have to their eſtates, it does not follow that the Legiſlature is precluded from changing the mode of payment, ſhould they, in their wiſdom, conceive ſuch a meaſure to be neceſſary and expedient. Shall we remind Mr T. S. of the thirlage bill, which enacted a commutation analogous in every reſpect to the one under conſideration? The thirlage bill provided full remuneration for the multures thereby commuted; and we are clear, that, in the event of ſuch being made to titheholders, as propoſed by the *Friend to Improvements*, no poſſible injury could be done to that body of men.

In our opinion, Mr T. S. does not advert to the ground upon which a commutation is ſolicited. It is not that the intereſt of individuals, either of one claſs or of another, might be benefited; but merely becauſe, without ſome regulation of that nature, the agriculture of the country cannot be improved to the extent it is capable of. When he admitted that tithes were an evil, he in fact ſurrendered the fortreſs, ſo far as its defence reſted upon his ſhoulders; for aſſuredly every evil ought to be removed, the moment it is diſcovered, in order that the oppoſite advantages may be enjoyed.

We are at a loſs to diſcover what Mr T. S. means, when he declares (p. 447.), that landlords have it in their power to remove the exaction in kind, by purchaſing their tithes. Does he mean to inſinuate, that an exchange has been erected for the accommodation of ſellers and purchaſers, and that ſales will be made the moment the *payer* is diſpoſed to treat with the *holder?* Certainly not: but if ſomething of this kind is not meant, then all his arguments and inferences on this head muſt go for nothing. So far from ſales being optional, it will be found that lay-tithes are moſtly in the poſſeſſion of ancient families, whoſe eſtates are entailed; conſequently, no meaſure, except an act of Parliament, is ſufficient to procure the neceſſary relief.

Whether tithes are an evil of ſuch magnitude as repreſented

by

by their adverſaries, and whether they are exacted, in every caſe, with ſeverity, are queſtions of little moment, ſeeing that the ſyſtem itſelf fully warrants the ſtricteſt exaction. A recurrence to our law-reports will amply prove, that the adminiſtrators of juriſprudence ſupport every claim for tithe to the fulleſt extent. That an evil ſhould be tolerated, becauſe it does not univerſally prevail, and that tithes ſhould be continued, becauſe they are not uniformly collected with rigour, is a kind of logic with which we are utterly unacquainted.

Mr T. S. ſeems to argue, *that whatever is, is right;* or why infer that tithes are not a great evil, becauſe the public have not univerſally called out for a remedy? In other words, he thinks that the burden is tolerable, becauſe it is endured; and, *vice verſa*, that, if intolerable, it would not be endured. This reminds us of the ſtory of the Engliſh ſailor condemned to be hanged. Upon hearing his ſentence pronounced, he ſhowed no emotion, but merely turned his quid in his cheek. The Judge, wiſhing to awake him to a proper ſenſe of his condition, ſaid to him, Have you not heard, Sir, that you are to die very ſoon? Why, pleaſe your Honour, replied the ſailor, I know I muſt die ſome time; and a little ſooner or later makes very little difference. But have you conſidered, Sir, what is to become of you after death? Not much, an't pleaſe your Honour. It is poſſible, Sir, that you may go to hell. Well, your Honour, while one has a being, he muſt have ſome one birth or another. But in hell, Sir, you will be tormented, and your torments will endure for ever. For ever, ſay you? Why, then, if ſo be the caſe, it is certain I ſhall be able to bear them.

Mr T. S. alſo ſeems to conſider the interference of byſtanders, with their opinions, as a kind of *jus tertii* interference. We doubt, however, if any proper opinion, on any cauſe, was either ever formed or fairly given by the parties intereſted *hinc inde*. Were all ſpeculation debarred upon ſubjects of public utility, except in thoſe who have an immediate intereſt, we fear ſpeculation would be attended with little profit. N.

FOR THE FARMER'S MAGAZINE.

Comparative Average Value of different kinds of the beſt Corns, in the North of Germany, relatively to their ſpecific Weights and Contents of Spirits, when employed for Diſtillation. Communicated by Chevalier Edelcrantz of Stockholm, preſently in this country.

	Wight.	*Quantity of Spirits.*
Wheat, 1 buſhel	- 53 lib.	- 11 pints.
Rye, ——	- 50	- 9 —

Barley,

	Weight.	*Quantity of Spirits.*
Barley, 1 buſhel -	42 lib. -	7 pints.
Malt, ——— -	30 -	6 —
Oats, ——— -	28 -	$3\frac{1}{7}$ —

The *buſhel* (himpte) is = 1631 French cubic inches.

The *pound* = 10,014 Dutch aſs, or 16 oz. 1 dr.

The *pint* (maaſs) = $62\frac{1}{7}$ French cubic inches.

The ſpecific gravity of the *ſpirits*, at 64° Fahrenh. therm. is = 0,930.

If we ought to determine the *prices* of different corns by their contents of ſpirits in given *meaſures*, of the weights above mentioned, their value neceſſarily would be as the numbers 11, 9, 7, 6, $3\frac{1}{7}$.* But if the *richneſs* of different corns is to be eſtimated by the quantity of ſpirits contained in the ſame *weight*, their real intrinſic value will be as the numbers 207, 180, 166, 200, 126.

The above table proves, that the ſaccharine matter or ſpirits contained in *different* corns, is not exactly in the proportion of their reſpective weights; but, in various ſorts of the *ſame* kind, experience has ſhown the ſpirits produced increaſe nearly in the ſame proportion as the weights.

The prices of different corns, however fluctuating, as in other countries, are, in general, in the north of Germany, proportional to their produce of ſpirits.

If the nouriſhing part or food contained in a vegetable is proportional to the ſaccharine matter or ſpirit produced, the *rye* ſeems, by this compariſon, to poſſeſs greater advantage over oats and barley than is commonly ſuppoſed.

An inhabitant of the northern counties is ſurpriſed to ſee the former plant not more cultivated in England and Scotland. That lands and ſoils which can produce wheat are not employed for rye, is very natural; but that oats and barley have the ſame right of excluding rye from all other ſoils, ſeems to indicate ſome ſtronger reaſon than the national prejudice againſt rye bread, † which is ſo prevalent in this country, as this plant ſucceeds very well upon almoſt all ſoils. ‡ A.

* This proportion is analogous to the ſtatement of Mr J. J. G. Weiſs, a German author, whoſe treatiſe on the diſtillation of corn is perhaps the beſt and the moſt practical yet publiſhed in any language.

† The ſame prejudice exiſts againſt oat bread in Sweden, and ſome other northern countries, where the pooreſt people can be compelled only by the greateſt neceſſity, in times of ſcarcity, to be fed with it.

‡ I ſaw, the paſt year, a very good crop of rye at the farm of the ingenious and learned Dr Thäer, at Zelle, near Hanover, on a very poor ſand. His field was managed in the moſt perfect ſtyle of the Norfolk drill huſbandry, and much ſuperior to the adjacent broadcaſt crops.

FOR THE FARMER'S MAGAZINE.

LETTER XIII.

Strictures on Farm-Management near London.

(Continued from p. 34. No. XIII.)

In the view, already given, of managing your land to the beſt advantage, I have not taken into conſideration the cultivation of ſaintfoin, or cinquefoil, for hay, or of red clover for ſeed. Theſe are crops with which I am almoſt totally unacquainted; and therefore it would have been preſumption in me to pretend giving any directions regarding them. In a large farm, or even in a ſmaller one that is divided into a convenient number of enclofures, ſufficient ſcope can readily be found for theſe, or for any other crops that may ſuit the ſoil and climate, or the ſituation of the huſbandman. Either of theſe laſt mentioned crops might be interpoſed on part of what has been appropriated for hay, in the foregoing ſcheme of rotation.

I have learnt, chiefly from Marſhall's writings, that ſaintfoin thrives almoſt excluſively on ſoils that have a deep calcareous, or limeſtone gravel bottom; on which ſoils it continues, for a conſiderable number of years, to give heavy crops of hay annually, without any manure whatever. From the ſame ſource of information, I underſtand that ſaintfoin will anſwer tolerably on dry-bottomed land that has been recently and fully manured with lime, chalk, or good marl. Following that idea, it is my intention ſoon to give it a trial on a ſmall field of about three acres, of good dry ſoil, which is to be fully limed in ſpring for a crop of barley. Along with the barley, I intend to ſow ſaintfoin, with a mixture of clover and rye-graſs. Should it not ſucceed, my field will in this caſe have a ſufficiency of the other herbage ſeeds for two years, which is my general plan. If it anſwers, I can then keep the field for hay as long as it ſeems profitable: And in that caſe, I ſhall introduce ſaintfoin as a permanent portion of my ſyſtem of huſbandry; and by that means ſhall be enabled to leſſen the tillage part of my farm, on the whole; and, conſequently, ſhall have a larger proportion of manure for the part which is in tillage.

When potatoes are cultivated in the field to any extent, they may occupy a part of what has been allotted for oats or beans in the foregoing ſcheme of rotation: But they ought never to be put in the place of a perfect fallow, as the potato culture cannot clean the ground, in any effectual degree, from root weeds. They muſt always be conſidered as an exhauſting crop, and conſequently the ſoil after them ought to be well manured. I do not, however, think your ſoil well adapted for the cultivation of potatoes; but

but ſo far as you may find it convenient to cultivate them, I would recommend the ground to be manured with long ſtrawey litter, in the bottom of the drills in which the potatoes are ſet, and not with your well-rotted dung or compoſt. The ſtraw will keep your ſtrong ſoil open, and will allow the potatoes to ſend out their runners on all ſides.

In the ſcheme of huſbandry which I have endeavoured to trace, I have omitted to mention tares or vetches. Theſe ought to be cultivated for the work-horſes, and may be grown on part of what is allotted for beans in the rotation I have pointed out. I would ſtrongly recommend theſe to be cultivated in drills; though I muſt acknowledge I have never yet followed that excellent practice myſelf, but mean to do ſo in future *. I underſtand there are two kinds cultivated in the ſouth; one of which is ſown before winter, and is uſed largely as ſpring feed for ſheep. With that ſpecies I am altogether unacquainted, and likewiſe with the expenditure of them on ſheep ſtock. The ſpecies called ſpring tares, which is ſown as early as poſſible in ſpring, is the only kind that I know any thing about, or that is in uſe, ſo far as I know, in this quarter of the country.

Rye is, as I underſtand, much cultivated in ſome parts ſo England, as an early feed for ſheep; but I am not at all converſant with the practice. But your ſoil is by no means fit for rye, which thrives but in dry ſandy ſoils.

Rape, likewiſe, is much cultivated in many parts of England, with the ſame intention, as an early ſpring feed for ſheep. That plant ſhould probably thrive with you; and it might be very beneficial to ſow it, immediately after harveſt, on the land which is intended next ſpring for beans, oats, or barley. In that caſe, it muſt be eaten off in proper time for working the land for either of theſe crops; and, by giving manure to the ſoil, would increaſe the produce of the ſubſequent crop conſiderably. I need hardly inſiſt againſt ſowing rape, with the above intention, on the land which is intended for fallow; as it would unqueſtionably interfere very much with the work neceſſary for rendering that proceſs an effectual cleaner of the ſoil, without which a fallow is a mere pretence, and does not deſerve the name.

Cabbages, cultivated in the field on a large ſcale, are, in many parts of England, found a moſt uſeful crop for feeding cattle during winter, and thereby producing a ſupply of manure for the farm. Theſe, too, would probably anſwer well on your ſoil, and may be placed in the room of beans, in the ſyſtem of rotation, but ſhould never be put inſtead of perfect fallow, and for the ſame reaſons already advanced with regard to potatoes. Not having

* This year (1800) it has been done with advantage.

ing any experience of cabbages as a farm crop, I have merely introduced them, by way of hint, without pretending to ſay any thing reſpecting their cultivation. As, however, they are raiſed in a ſeed bed, and afterwards planted out, the land can be conſiderably cleaned before planting, and, if free from couch, they might often ſtand in place of fallow, as they fully admit of deſtroying ſeed weeds, by hand-hoeing and ploughing the intervals. They might even admit of croſs-ploughing the intervals, if ſet in regular rows, not in the quincunx order.

Turnips are a very material article of cultivation on light, dry-bottomed land; but as yours is not of that deſcription, I have not taken this crop into conſideration. I cannot, however, refrain from objecting very ſtrongly againſt the mode of cultivating turnips, which I ſaw practiſed through a very great extent of my late journey. Sowing turnips broadcaſt, not only cannot give ſo good a crop, as when ſown in regular drills with large intervals, but does not admit of their being cleaned ſo effectually. The plough can never be admitted on the land, after turnips are ſown in the broadcaſt way; neither is it poſſible to ſet them out at ſuch regular diſtances. On land fit for the purpoſe, turnips are a moſt valuable crop. They come in place of fallow, for which, when properly cultivated, they anſwer moſt effectually; and they both produce a profitable return, and fit the ſoil either for a ſubſequent crop of wheat or barley moſt excellently. Five and ſix guineas an acre are common prices for good turnips in this country; and this year, when they have very generally failed, eight and ten guineas are already bargained for.

There are two ways of expending the turnip crop practiſed in this country;—either drawn from the field they grow upon, and given to cattle or ſheep in the houſe, the fold-yard, or another field; or folded on with ſheep, as they grow on the ground. In the neighbourhood of large towns, they are ſometimes ſold off the ground altogether to cow-keepers. This mode deprives the farm of the manure they produce, and can only be juſtified by high prices, and in ſituations where manure can be purchaſed. I have known ſixteen guineas an acre given in the neighbourhood of Edinburgh. And this ſeaſon, I ſhould conſider good turnips as being worth twenty guineas in that ſituation.

I have known turnips raiſed to advantage, in land as ſtrong as yours, by the following procedure. After giving the land as complete a fallow as poſſible, by making the various operations follow each other quickly, it is ridged up, by twice gathering, into fifteen or eighteen feet lands or ridges. Drills are then run acroſs theſe ridges, at twenty-ſeven to thirty inch intervals: the manure is ſpread in the drills, the drills ſplit open to cover

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it, and the turnips ſown on the new drills. To have a good crop, the work ought to be completed from the beginning to the middle of June.

When the turnips have got four rough leaves, the intervals muſt be gathered up by the ſmall plough, to bury as many weeds as poſſible; or it muſt be ſtirred by the ſkimming plough or horſe-hoe, as directed for beans. After this, the turnips are thinned to ſingle plants, at about ten or twelve inches aſunder, and all the weeds deſtroyed by the hand-hoe. When a ſecond ſet of weeds come up, the ſkimmer and hand-hoe are uſed a ſecond time, and then the turnips are earthed up by the plough with two mould-boards.

During the progreſs of all theſe operations, eſpecial care muſt be taken to clear out all the water furrows in every part of the field, as each operation is apt to obſtruct them very much.

The greateſt objection to turnips in ſtrong ſoils, is the poaching, which is almoſt unavoidable, either in eating them on the ground by ſheep, or in carrying them off. The only way to avoid this, is, to carry them in panniers on horſeback; or they may be taken off in carts during froſt.

The next article which I have to notice is the lime huſbandry, and it is an important one; for the poſſeſſion of land conſtitutionally diſpoſed to receive benefit from a calcareous application, may ſafely be conſidered as a moſt deſireable affair to every good huſbandman; though in your caſe it is unneceſſary to enlarge upon its advantages.

Lime is one of the greateſt means of improvement in this country, and is uſed both on land newly broken up from a ſtate of nature, and on old tillage or graſs land; but, owing to the vaſt diſtance of lime from your property, I have not ventured to recommend it, even as an experiment on a ſmall ſcale. Beſides, from the great quantity of calcareous matter, or chalky or marly particles, contained in the *galt* or ſubſoil on your eſtate, it appears to me that all the improvement, deriveable from lime or marl, may be procured, with you, merely by ploughing a little deeper than ordinary, ſo as to turn up a part of the *galt*, and to mix it intimately with the ſoil.

This matter will need, however, to be managed with delicacy and caution; as it will require patient experiment, and ſome continuance of experience, to aſcertain, with certainty, whether the mixture of the *galt* with the cultivated ſoil is attended with advantage, and to what degree. For this purpoſe, I would recommend the eſſay to be made in the following manner.

In one of your fallow fields, let two or three ridges in the middle of the field be ploughed, before winter, a little deeper than the reſt, ſo as to turn an inch or more of the *galt* to the ſurface,

ſurface. Allow it to remain in this ſituation all winter, to receive the mellowing influence of the froſt, and other circumſtances of the weather. The ſucceeding operations of the fallow proceſs, as already directed in theſe letters, will mix it intimately with the ſoil; and you will diſtinctly ſee and appreciate its effects on the ſucceeding crops, by compariſon with thoſe on the reſt of the field. If advantageous, which I am rather inclined to think it will be, you can follow out the example, on a large ſcale, in all ſucceeding fallows. If the contrary, I need not ſay you will avoid it in future. If the fallow is perfectly worked in every reſpect, I ſhould expect it to be of ſingular utility; not otherwiſe. And I muſt adviſe you not to expect the full benefit of this practice to be extremely obvious on the immediately ſucceeding crop.

If circumſtances admit of your procuring the galt in conſiderable quantities by itſelf, its effects might likewiſe be tried when mixed in compoſt, and laid on graſs land, as a top-dreſſing before winter.

You aſk my opinion on the propriety of a dairy farm on your eſtate, and my obſervations on the beſt manner of conducting one. I do not think your land adapted for it, as I obſerved a great ſcarcity of ſucculent herbage, during the dry weather which prevailed at the time I ſurveyed your property. In my opinion, a dairy farm is only adviſeable in marſh land that is not fitted for profitable tillage huſbandry, ſuch as in the lower parts of Cambridgeſhire.

If you are determined to try the dairy, I would recommend that it be combined with the tillage huſbandry I have already endeavoured to line out for you. But I by no means think it will turn out nearly ſo profitable as the combination of ſheep and tillage; and I know that the paſturage of ſheep improves the ſoil, both for the production of graſs, corn, and leguminous crops, vaſtly more than the paſturage of cattle or horſes.

In the event of your keeping a number of cows, I would recommend that they ſhould be fed altogether in the houſe or fold-yard, during ſummer, on cut clover, lucern, and tares; and on hay, when theſe ſucculent green foods are not to be had. I am certain, that, in this way, two acres of land will maintain fully as much ſtock, either of cows, oxen, or horſes, as three acres can poſſibly do in free paſture. You will in this way, likewiſe, get a vaſt quantity of additional manure for your tillage land. A ſmall cloſe, near the houſe, ſhould be appropriated for the cows to get air, exerciſe, and water, for an hour or ſo, every morning

and evening. They ought likewiſe to be regularly curried every day.

For the ſame reaſons, economy of food and production of manure, I would ſtrongly recommend keeping your work horſes in the yard all ſummer and autumn on cut green food.

I do not at all approve the long yokings which are practiſed with you. In this country, the horſe-work of the farm is divided into two yokings, with a conſiderable interval for food and reſt. The horſes are thus enabled to do a vaſt deal more work, with a great deal leſs fatigue both to the men and themſelves. In hot weather, we wiſh the horſes to begin work by four o'clock in the morning. They work five hours; then reſt at home during the heat of the day, and again work for four hours, ſometimes five, in the afternoon.

While leading home corn or hay, we begin as ſoon as it is light, or whenever the dew is off, and work continually as long as we can ſee; the horſes having always abundance of food before them while unloading. In theſe two employments, every exertion of ſpeed is uſed, leſt the crop be injured by the coming on of bad weather.

Should you be inclined to build a farm-court of offices on a complete plan, I ſhall endeavour to deſcribe one in my neighbourhood, which I think the moſt perfect I ever ſaw.

The buildings which compoſe the court of offices, form three ſides of a ſquare, open to the ſouth, having the barn in the middle of the north ſide, behind which is the rick yard; and the ſtables, cow-houſes, and feeding ſhed, complete the reſt. At a proper diſtance from theſe, leaving a wide paved road all round, a ſquare wall encloſes the fold yard, which is divided into four, by two croſs walls, and has a large ſquare ſhed, open on all ſides, over the interſection of the croſs walls. Proper gates are placed to admit the cattle, and to take out the manure; and windows are left in the ſquare outward wall, oppoſite to the doors of the ſtables and cow-houſes, for throwing the litter into the fold-yard.

By this arrangement, the young cattle of four ſucceſſive years are kept ſeparate, which prevents the younger being maſtered, gored, and hindered from feeding by the elder. They have all a covered ſhed for ſhelter during bad weather; and there are racks for giving them fodder, both in the four diviſions of the ſhed, and in the four open yards.

Along the ſouth ſide of this yard, there are proper places for pigs and poultry; and a pump ſupplies water to all the diviſions, by means of pipes and troughs. The ſhed, for carts and implements of huſbandry, is at the ſouth end of one of the wings, for eaſy

eaſy acceſs. A granary is conſtructed in one of the lofts adjoining the barn; and the cattle-man has the only dwelling-houſe in the yard. All the dwellings of the reſt of the farm ſervants are at ſome diſtance, to leſſen the danger of fire.

In ſummer and autumn, the work horſes are kept, upon cut green food, in the four diviſions of the fold-yard.

Another neighbour of mine is getting a new ſet of offices, in which each pair of work horſes, and each pair of feeding oxen, are to have an open ſhed and fold-yard; allowing them, at all times, to be either in the air, or under cover, at their pleaſure.

The only other topic which occurs to me, as worth troubling you about, is the proper diſtribution of farm labour throughout the year, ſo that at all times your men and horſes ſhall be fully and profitably employed, ſhall never be idle, and ſhall never be hurried. This, you will readily obſerve, is of infinite importance with regard to economy, as idle horſes muſt be fed, and idle men muſt draw their wages.

Suppoſe harveſt and the wheat ſeed finiſhed, the next operation is, to plough the land which is to be fallow, or to carry beans, peas, or tares, next year. This continues during the whole latter part of autumn, and throughout the winter, in its intervals of open weather, provided always that the land is not wet; for it ſhould be an invariable rule, on your land, never to plough it when wet. When weather forbids ploughing, manure is to be collected, or led out to the neighbourhood of where it is afterwards to be laid upon the land.

In early ſpring, the ploughing, drilling, and harrowing of the bean and tare land, next occupies the ſtrength of the farm. After that, the oat crop, and then follows the barley land. When theſe are completed, the various operations of the fallow proceſs, the horſe-hoeings to the drilled crops, leading home hay, and then corn, fill up the months of ſummer and harveſt. Laying manure upon the fallow land, giving it the ſeed furrow, and harrowing in the wheat, fill up the remainder of the ſeaſon. Bringing home fuel, carrying out grain to market, and, if there is a thraſhing machine, thraſhing out the crop, are jobs that occur at intervals, and which are to be performed when more immediate operations are not preſſing, and when weather does not allow to plough and harrow. *Vale.* *R. r. r.*

NOTE BY THE CONDUCTOR.

Theſe Strictures being now brought to a concluſion, it remains an incumbent duty upon us to return our ſincere and

hearty thanks to the author of them, for the abundant and liberal ſupply of materials thereby furniſhed to us. Nearly the whole advice given by him to his Engliſh friend, accords with the moſt approved ſyſtem of rural practice; and we are exceedingly happy to ſtate, that a number of our correſpondents have expreſſed great ſatisfaction with the information communicated. We will be proud to receive a continuance of this gentleman's favours, who appears well verſed both in the theory and practice of rural ſcience.

It is perhaps neceſſary to remind our readers of the origin of theſe Strictures. Requeſted by a gentleman reſident about fifty miles from London to viſit his eſtate, and give an opinion concerning the neceſſary improvements, the author, after a minute inſpection in Auguſt 1799, made a report, the ſubſtance of which is preſented in the ſeveral letters inſerted in this Magazine. We refer our readers to Vol. II. p. 38, containing an introductory letter which ſufficiently explains the ſcope and intention of the Strictures. Indeed the author ſeems to have formed ideas of Engliſh huſbandry ſomething ſimilar to thoſe entertained by us, after examining the ſame tract of country which came under his obſervation. N.

TO THE CONDUCTOR OF THE FARMER'S MAGAZINE.

General Obſervations on Highland Rural Economy.

SIR,

I am diſpoſed to believe that your correſpondent 'The Rural Economiſt' (page 262), meant well, when he communicated his '*Reflections on the means of preventing emigration from the Highlands*;' though I cannot approve of all the propoſitions offered by him for promoting the welfare and proſperity of that quarter of the iſland. I obſerve, that he conſiders capital ſtock as the *ſine qua non* of improvement, which, though I am willing to allow in the abſtract, yet on the whole is leſs neceſſary, when the preſent ſituation of the Highlands is conſidered. I am ſatisfied, were the preſent race of people ſuffered to remain in the Highlands, that ſufficient capital ſtock would ſoon be gained by them, provided they were ſecured by proper leaſes, and perſonal and predial ſervices, at this time ſo prevalent, utterly aboliſhed. Were theſe things done, the greateſt part of the Highlands might, in time, be as well cultivated and as populous as the mountainous countries of Wales and Switzerland. The Highlanders are ſure-

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by a hard-working and induſtrious ſet of people when allowed to work for their own benefit; and is not this equal or perhaps ſuperior to a money capital? I own both would be better; but how ſeldom are they found united, and how little can we hope to ſee them tranſported to the Highlands? I would wiſh ſome good pen were employed in painting the generation of capital. Mere perſonal induſtry is certainly the great anceſtor. The induſtrious man leaves his family enriched by his little acquiſitions, and his example. His little property accumulates under the management of his children, and increaſes. The third and fourth generations become ſtill richer, and are able to improve their houſes, their cattle and utenſils, their furniture, their dreſs; till at length the country is poſſeſſed by rich farmers, and becomes well cultivated. Perſonal induſtry may therefore be conſidered as the male anceſtor of capital; ſecure tenure as the female; and, between them, ſince the reign of Henry VII., have been begotten all the riches and improvements of England. From thence ſprang our maritime ſtrength. It was country gentlemen who fitted out our firſt fleets of diſcovery. A Sir —— Gilbert of Devonſhire, Sir Walter Raleigh and others, pawned their landed property to furniſh capital for ſuch purpoſes. Our cities and towns were firſt enriched by the retail of goods wanted for the farmers, and by the purchaſe and exportation of corn and wool which the farmer produced. The children of retailers became what we properly call merchants, and ſo laid the foundation of the preſent great ſuperſtructure of Britiſh commerce. How eaſily the capitals of Glaſgow, Liverpool, and Birmingham, might be traced to this ſource, nay, even of proud London herſelf! To perſonal induſtry and ſecure tenure was added a good and free conſtitution, whereby the rich were ſecured from the rapine of the powerful, and their violence. Theſe three formed a great loadſtone, which has attracted all the metals of the world, and all its commodities, within the vortex of this ſmall iſland of Great Britain, the very debts of which exceed the wealth of the reſt of the globe. I have ſtated theſe things as explanatory of my reaſons for doubting the neceſſity of a money capital, which to your correſpondent ſeemed abſolutely neceſſary for the improvement of the Highlands, and which that country has little chance of receiving. Indeed I do not think that any benefit would be received from capital, unleſs the ſyſtem of ſhort leaſes and perſonal ſervices were to be at the ſame time abandoned.

I lately examined a Highland eſtate, which has been managed in a liberal manner for a number of years back, from which I can deduce ſtrong arguments in ſupport of what I have advanced. The number of families upon the eſtate alluded to, amounted, ſeventeen years ago, to 124, and I now find an increaſe of 77, the

whole amounting to 201. Theſe new families, ſuppoſing them to have cultivated only two acres of waſte land each, have added 154 acres of cultivated land to the eſtate; and I underſtand, one of them received lately 28l. to give up his little ſettlement to a perſon who wanted to dwell there. I heard of no emigrations of the people on the eſtate, except one man, who repented and returned. I found about 300 acres of plantation of larch and fir trees in a very thriving condition, in a country deſtitute of wood. Many of the tenants are now lodged in houſes built with ſtone in place of earth, which formerly was the material whereof their habitations were compoſed.

I ſaw a *Meadowbank midden* or two on the eſtate; and it gives me pleaſure to notice, that this compoſt will be of ſingular advantage in the improvement of the Highlands. It is only of partial utility in other parts of Scotland; but in the northern diſtricts, where every tenant has acceſs to peat earth, it will prove an univerſal benefit, and tend more than any thing to extend the cultivated land, by quadrupling the manure.—With beſt wiſhes for the ſucceſs of your Magazine, I am,

Yours, &c. X. Y.

TO THE CONDUCTOR OF THE FARMER'S MAGAZINE.

Queries concerning Moſs anſwered.

SIR,

As no other of your correſpondents, better acquainted with the ſubject, have anſwered the query of R. C. in your Magazine of May laſt, 'Which is the beſt ſort of peat moſs for manure?' I preſume to anſwer, from my obſervation, that of the three ſorts deſcribed by him, the wood moſs is the beſt. The black peat, principally compoſed of heath, decayed ſphagnum, and the roots of the eriophora, is next. And the ſpongy flow-moſs, or red-bog, as it is called in Ireland, derived almoſt entirely from more recent ſphagnum, is the worſt for every purpoſe of manure or fuel.

A. S.

BRANCH

BRANCH II.

REVIEW OF AGRICULTURAL PUBLICATIONS.

Statiſtical Survey of the County of Down, with Obſervations on the Means of Improvement: Drawn up for the conſideration of the Dublin Society. By the Reverend John Dubourdieu, Rector of Annahilt.

THE Reporter of this ſurvey has executed his taſk in a way that does credit to his impartiality and abilities; and we hope it will afford ſome entertainment to our readers, to receive a general idea of the ſtate of a conſiderable county in our ſiſter kingdom, from a review of this performance. This we ſhall give as conciſely as poſſible, while we remark particularly what is either praiſeworthy or cenſurable in this ſurvey, as far as regards the *agriculture* of Downſhire. What is ſtatiſtical, and not properly agricultural, muſt either be omitted entirely, or noticed very ſlightly.

The geographical ſtate and circumſtances of Downſhire form the ſubject of the firſt chapter.

It is a maritime county, being bounded on the eaſt and ſouth by St George's Channel, containing above 558,000 Engliſh, 440,000 Scotiſh, or 344,648 Iriſh acres. Its civil diviſions are nine baronies of unequal value, extent, population, and proportion of public burdens; and its eccleſiaſtical diviſions are, the two biſhoprics of Dromore and Down, the former containing twenty-one, and the latter forty-two pariſhes. The climate is variable, but not ſubject to the extremes of heat or cold, or of wet or dry. The Reporter remarks, that the month of October is generally very agreeable, and that the extremes of either wet or dry ſeaſons are equally unfavourable with reſpect to the fruits of the earth; and he ſtates as a proof of this, that the years 1799 and 1800 were equally unproductive, the crops of both years not equalling that of 1801. We ſubſcribe to his general remark, though we ſuſpect that the crop of 1801 was not more than equal to that of the two preceding years, and believe that the deficiency of crop 1800 was in no ſmall degree occaſioned by the bad ſeed uſed that year.

We are informed, that the ſoil of Downſhire 'has every gradation from ſandy loam to ſtrong clay, which is in moſt places intermixed with ſtones of every ſize.' It has been obſerved, that ſo great a proportion of ſtones is mixed with the ſoil of Ireland,

that we ſhould rather call the different ſoils by the names of a ſtony loam, a ſtony clay, &c. than either a pure loam, or a ſtrong clay. The ſurface is extremely unequal, there being little flat land, execept on the banks of rivers. Though no mines are wrought at preſent, copper and lead ore have been found in different parts of the county. Eight different places are famed for their mineral waters, which are all chalybeate; and one place, viz. Ballynahinch, for its ſulphuric-chalybeate ſpring. An alum ſpring, of unknown ſtrength, is alſo mentioned.

There are four principal rivers in this county; and we remark with pleaſure, that two of theſe, the Newry and the Bann, are united by a canal, by which veſſels of fifty and ſixty tons paſs through the heart of Ulſter. Another canal is connected with the Laggan; but we are ſorry to find, that owing to its not being kept detached from the river, it is not likely to be beneficial either to the proprietor or to the public. Mr Dubourdieu remarks, that the Laggan is a mountain river, ſubject to great floods, and very unfit for navigation. When we read this part of the ſurvey, we could not help thinking of the reply made by the celebrated Mr Brindley, the conductor of the Duke of Bridgewater's canal. When the Houſe of Commons aſked him, what was the uſe of navigable rivers? he anſwered, 'To feed navigable canals.'

In this county, we are informed, that the number of ſmall lakes or loughs is very conſiderable, and forms one of its many beauties, though moſt of them are unadorned with wood of any kind.

The ſtate of property is conſidered in the Second Chapter of the Survey.

Property is much divided, and in all gradations, from the largeſt eſtate to the ſmalleſt freehold. The management of eſtates is deſcribed to be very ſimple; conſiſting only in letting the farms, receiving the rents, and regulating the turf bogs, which are very valuable, but much waſted, by being cut down for fuel. The Reporter ſeems to be too much alarmed for the failure of theſe; and informs us, that a whole day is often conſumed in going for and returning with one load of fuel from theſe bogs. Whenever this happens in a maritime county, which has two navigable canals, if induſtry is encouraged, and coals imported, theſe diſtant or decayed turf bogs will ſoon be deſerted, and the agriculture of Downſhire will be much improved, by employing the farmers' ſervants and horſes in hoeing of turnips during the ſummer months, inſtead of taking wretched cars to a great diſtance for half a load of fuel.

Moſt of the property is freehold, and the number of freeholders is above *ſix thouſand*. We are afraid that this number is too great,

great, viewed either in an agricultural or political light. Were there an Agrarian law eſtabliſhed in Downſhire, and its territory divided among its freeholders, each of them would have fifty Iriſh acres. This would produce a temporary equality, and a turbulent democracy, in which agriculture would be very imperfectly conducted. But at preſent, when landed proprietors contrive to keep a multitude of freeholders on their eſtates, in order to promote their county politics, neither rational liberty, nor an improved cultivation, will be attended to by the great body of theſe freeholders. We ſhould be glad to hear there were more large farmers, and fewer freeholders in this county. The rents indeed are high, being 20s. per Iriſh, 15s. 6d. per Scotiſh, or 12s. per Engliſh acre.

The Third Chapter treats of the State of Buildings; and the judicious Reporter very properly paſſes over the ſpacious habitations of the nobleman, and the numerous and elegant manſions of the gentleman, in order to inſpect the houſes of the farmer, and the cottages of the poor. We are ſorry to find, that theſe are in general neither large nor convenient. The farmer's houſe is for the moſt part a low cottage, with only one fire-place, and two or three rooſts without fire-places, all on the ground floor. The cauſe of this want of fire-places is the Iriſh tax, called hearth-money, amounting to 2s. 8½d. for every fire-place, where there is more than one in a houſe: And he judiciouſly obſerves, that if Parliament had made every houſe which had two fire-places, pay only for one, little loſs would have accrued to the revenue; and fevers, and other infectious diſorders, would not be ſo fatal. This deſerves the attention of our legiſlators, who wiſh to gain the affections, and to promote the happineſs of the people of Ireland. The cottages are deſcribed to be in general very poor, and the cottagers much toſſed about and haraſſed. The judicious Reporter recommends to the landed proprietors to build villages for the accommodation of all cottagers who are tradeſmen or manufacturers. Married ſervants, whoſe dependence is entirely on the farmers, muſt of neceſſity reſide where they are employed. It is to be hoped, that the union of Ireland to Great Britain will tend much to ameliorate the condition of the peaſantry of our ſiſter kingdom; and it is not to be denied, that much of the diſcontents in that kingdom are occaſioned by the wretched condition of many of the lower claſſes of the inhabitants. The ſituation of the peaſants of Scotland has been much improved ſince 1707.

The Fourth Chapter of the Survey treats of the Mode of Occupation.

Here the ſize of farms is firſt conſidered. The large farmer, who rents from 50 to 100 Iriſh acres, ſubſiſts ſolely by agricul-

ture;

ture; and the ſmall farmer, who ſubſiſts partly by his trade or occupation, poſſeſſes from 20 acres down to a ſingle acre. The minute diviſion of farms is very properly repreſented as prejudicial to agriculture; and the number of ſmall landholders, or petty occupiers of land, who were ruined in 1800 and 1801, in conſequence of the deficient crops of 1799 and 1800, is adduced as a matter of fact, to prove that the tradeſman or manufacturer who has no land, does not find ſo much difficulty in maintaining a family, as he whoſe attention is divided, and whoſe annual expences are increaſed by his having a ſmall farm, of which he muſt pay the rent and taxes in an unproductive ſeaſon. It is alſo very properly obſerved, that 'the induſtrious cottager, whether labourer or weaver, is as beneficial to the public, and as comfortable to himſelf, as any other denomination of perſons; but that every gradation from him to the real farmer, is only a gradation of difficulties.'

The character of the Downſhire farmers is repreſented in a very favourable light. The middle claſs, who rent from 20 to 50 Iriſh acres, are deſcribed as a reſpectable claſs of men, in point both of underſtanding and morals. The Reporter adds, that 'an eſtate portioned out among men of this deſcription, where nothing is deducted for repairs, where there are no poor's rates, and where tithes are moderate, muſt be productive, and not difficult to manage.' Much as we reſpect his opinion, we wiſh to ſee more large farms, a number of villages erected, and the farmer's capital all applied to the improvement of the ground, while he pays a per centage to the landlord, for money expended on neat and convenient farm-houſes, and other buildings. We acknowledge this would occaſion a little more trouble in the management of eſtates; but that would be repaid by the improved agriculture, and alſo improved architecture, of Downſhire.

In the preſent ſtate of that county, it is ſaid, that if two farms taken together ſhould employ two draught beaſts, all work that requires two being performed by a mutual lending of cattle, a very great point would be gained, as much as the Reporter thinks can be expected. We hope he ſhall live to ſee his farmers fewer in number, and almoſt every one having conſtant employment for at leaſt four draught horſes, while the villages abound in expert manufacturers, or induſtrious tradeſmen and day-labourers. In the mean time, we obſerve with pleaſure, that the rents are almoſt all paid in money; that tithes are very moderate, and that there are no poor's rates in this county.

On the laſt article of expence and profit, the Reporter could not be ſuppoſed to give any thing accurate; but he has ſtated a compariſon, taken from fact, of the diſtribution of crop on two farms

farms of 50 acres each, which deſerves particular attention. The firſt farm was well cultivated, and had nearly one third part in clover; the ſecond had no clover, and was cultivated in the common way. The former contained 8 acres of wheat, 8 acres of barley, 8 acres of potatoes, 8 acres of oats, and 16 acres of clover, with 2 acres of meadow; and it maintained a ſtock of 7 cows and a bull, 7 young cattle, 15 ſheep, 3 pigs, and 6 horſes. The latter contained only 4 acres of wheat, 4 acres of barley, 8 acres oats, 4 acres potatoes, 4 acres meadow, 26 acres graſs, and maintained only 4 horſes, 8 cows, 6 young cattle, and a few ſheep. The Reporter aſcribes this difference ſolely to the introduction of clover; but it was doubtleſs occaſioned, in part, by the raiſing a greater quantity of potatoes, and by a more improved cultivation. We find afterwards, that there was not ſo good a rotation of crops as might have been eſtabliſhed on the firſt mentioned farm; and yet its annual produce was at leaſt 100l. more valuable than that of the ſecond; or it was 2l. per acre of greater annual produce. This ſtatement of facts is worth a thouſand ſpeculations on agriculture, or calculations of expence and profit.

The Fifth Chapter of this Report reſpects the Implements of Huſbandry.

Here we find, that 'thoſe which are in general uſe are few and ſimple: Cars for draught horſes; ploughs for tillage, of no great ingenuity, but light and ſtrong; and harrows, for either one or two horſes.' It would have been a little more ſatisfactory to have informed us, what is the uſual price of theſe cars, when the axle ſtill turns with the wheels; how great a load they carry; whether theſe wheels have iron hoops or rings; and whether they ſtill be all of wood. We obſerve, with pleaſure, that excellent implements of huſbandry are uſed by the proprietors, and by the firſt claſs of farmers. Theſe will be gradually adopted by the middling farmers; and then the ſmall farmer will either obtain them, or he muſt ſoon become a day-labourer, from the diſadvantages attending ſmall farms and bad implements of huſbandry, and from the riſe that is taking place in the money price of labour.

The Sixth Chapter, on the ſubject of Fences, informs us, that the enclofures, in general, are a diſgrace to the county, generally conſiſting of a ditch or bank, without any hedge, ſometimes having a few plants of furze ſtuck into the bank, but very rarely planted with quicks, though the raiſing of hedges is well underſtood, and, the Reporter hopes, will ſoon be more generally practiſed. We think, that dry-ſtone walls, or Galloway dikes, ſhould be generally uſed in a country ſo full of ſtones; and that thorn

thorn hedges ſhould be raiſed in places where ſtones are not in ſo great abundance; and we hope, that gates, as well as fences, will be generally uſed in Downſhire. At preſent, we find, that 'the uſual method of putting cattle into the fields, is by a buſh ſtuck in between two jambs of ſtone or ſods, which is put into its place, or removed from it, at the evident peril of the fingers.' We hope that Downſhire ſhall ſoon have better gates, and better encloſures.

The Seventh Chapter, which is entitled Arable Land, is divided into five ſections: 1. Tillage: 2. Fallowing: 3. Rotation of crops: 4. Crops commonly cultivated: and, 5. Crops not commonly cultivated.

We are ſorry to find, amongſt ſeveral judicious obſervations on tillage, and ſome high compliments paid to the *claſſical Tull*, that the general practices of the farmers are very bad; that fallowing is ſeldom practiſed; that the method of cropping is ſo exhauſting to the land, being generally inceſſant ploughing till the ground is quite worn out; that the barony of Lecale is the only place in which any thing like a rotation of crops is generally obſerved; and that, even there, two, and ſometimes three white crops, are taken, without one green crop intervening; nay that, after a potato fallow, which is the general preparation for wheat, inſtead of ſowing graſs ſeeds with the wheat after hoeing it in ſpring, two other corn crops are often taken before it is laid out in graſs.

Among the crops commonly cultivated, we find that *here* is called *winter* barley, and is managed every way like wheat. We are at a loſs to know what ſpecies of barley is here meant. *Bear* or big, or what is called *Cheſter* bear, is a four-rowed grain, and runs to ſtraw more than barley, which is two-rowed, if ſown in winter. If ſown in ſpring, it is from two to three weeks ſhorter time on the ground than barley. We ſuſpect there is ſome miſtake here.

We are ſorry to find, that while *turnips* are among the crops *not commonly* cultivated, peas ſhould be leſs uſed than formerly. It would be a great matter, where a field has been limed, and produced a crop of wheat after potatoes, that it were ſown with peas before another white crop, viz. barley, is taken.

The different methods of cultivating potatoes are deſcribed in this chapter; and the Reporter has ſtated a fact, which ſeems to ſhow, that repeated crops of potatoes do not exhauſt the land, viz. that, near the town of Killough, he ſaw a piece of ground that had produced crops of this root for 40 years; and that, in 1801, they were better than ever he had ſeen them. We believe, that if the flowers are picked off, and the potato not allowed to apple, potatoes are not ſo exhauſting a crop as is generally imagined.

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The Eighth Chapter treats of Graſs.—The natural meadows of this county are not well managed; though the Reporter has ſuggeſted ſeveral improvements. Among the artificial graſſes, we find the white graſs, *holcus mollis*, ſown on *clay* ſoils where the red clover has not yet ſucceeded (we ſuppoſe becauſe the land has been too foul and too much exhauſted), and that trefoil (*medriago lupulina*) is recommended as much ſuperior to red clover for grazing or cutting green, though as cheap as hay ſeed. We have ſome doubt as to the fact, where the red clover is properly cultivated; but it may be worth while to try an experiment in Scotland, where the land is in good order.

This chapter contains an account of the principal graſſes found in Downſhire. Here we were ſurpriſed to find the *avena elatior*, or knot-graſs, a moſt troubleſome weed in arable land, had, when moderately dunged, produced a moſt luxuriant crop of hay.

In the ſame chapter, under the article *feeding*, we learn, that two bullocks, weighing eighteen hundred weight, were, in 1801, ſold for 96l.—a proof of the high price of butcher meat, as well as of the rich feeding at Hillſborough.

The Ninth Chapter, on Gardens and Orchards, informs us, that gardening is not much attended to; that potatoes ſeem to be gaining ground on all other roots and vegetables, except among gentlemen, and in the neighbourhood of Belfaſt.

The Tenth Chapter is on Timber, Plantations, and Woodlands. We learn, here, that Downſhire is not a well-wooded country; but a liſt of various kinds of timber trees, fraught with uſeful information, is given us; and we have a table of the circumference of various kinds of trees, between 50 and 60 years old.

On the ſubject of Waſtes, which forms the Eleventh Chapter, we are happy to find, that the only part of the county, which can in any degree be referred to the above title, is contained in the mountains of Mourne and Upper Iveagh; and even theſe afford, in moſt places, ſupport to a hardy race of cattle and ſheep; and that the turf bogs, in the vallies between the mountains, by opening of new roads, are like to become of great value, being worth four guineas an acre for the purpoſe of fuel. We hope that coals will be found in this county, or, even if imported, will be ſubſtituted in place of theſe diſtant turf bogs; and that the good women, who diſlike the ſmut of the coals, will lay aſide their prejudices, and allow their huſbands to improve their lands, inſtead of carrying turf from a great diſtance.

The Twelfth Chapter, entitled *Improvements*, treats of Draining, of Paring and Burning, of Manuring, of Weeding, of Irrigation.

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Under-draining, we are told, is in general well underſtood, and not difficult to execute, from the number of ſtones in the land. The Reporter does not ſeem to be acquainted with Mr Elkington, but mentions Dr Anderſon's method of tapping; and relates an inſtance in which it ſucceeded. Paring and burning is only practiſed in mountainous parts, or where moory ſoil abounds. Dung is principally applied towards raiſing potatoes; and the little farmers are ſaid to be very induſtrious in this particular. One farmer's method is inſerted as deſerving of notice—'His dung-hill being placed on a riſing ground, he made a cut from it, with two or three ſtops to ſave the water in its deſcent: above theſe ſtops he always threw in a quantity of earth, which being ſaturated with the moiſture from the dung, he removed it, and again filled the trench. His attention to every branch of huſbandry was directed by equal ſagacity; and, from being a labourer, he took a farm, not 20 acres, and died lately worth 500l.' The fact was worth recording; and the man's name ought to be known. The fame of the induſtrious farmer is well earned; and ſtimulates others to exertion.

The injudicious cropping, after ground has been limed or marled, is honeſtly related in this chapter. The careful weeding of potatoes and flax is alſo mentioned; and the Reporter wiſhes that paſture were alſo weeded. Were the land properly drilled and hoed, and not exhauſted by cropping, before it was laid down, the weeding of graſs would be unneceſſary. The watering of meadows in this county is in its infancy; yet the Reporter has made ſeveral judicious obſervations on this ſubject.

The Thirteenth Chapter treats of Live Stock, viz. Horned Cattle, Horſes, Sheep, Hogs, Rabbits, Pigeons, and Bees.

The cattle are kept chiefly for the dairy, and a mixture of every kind; although there are a few breeds of excellent cattle. The county does not ſupply itſelf in horſes; and its only native ſheep are confined to the mountains: a vaſt number of hogs are bred annually. Rabbits are kept only in a few places. Poultry of all kinds are reared chiefly with potatoes. Pigeons are general, though there are few pigeon-houſes. Bees are reckoned to thrive well; and a plate of a bee-hive is given in the ſurvey. By this kind of hive, which is filled with different glaſſes, much honey is gained, without killing the bees; and it is ſtated, that upwards of 90 lib. of excellent honey were taken out of a large wooden hive, in which the common or inner hive was encloſed.

The Fourteenth Chapter, which is entitled *Rural Economy*, informs us, that the farm ſervants take all kinds of work in their turn: that cottagers are paid partly in money and their diet, and partly by their holdings. Labourers receive their diet in part of their

their payments, and the money, or wages in money, varies according to circumſtances, from 6d. to 2s. *per* day.

The Fifteenth Chapter treats of Political Economy, as connected with agriculture. Here we learn, that the roads are excellent, but too often ill conducted; and ſteep, inſtead of being nearly level: that fairs are eſtabliſhed in every county, and weekly markets in moſt of the towns: and that the exports of the county, in linen, pork, wheat, and barley, are very valuable. A ſhort hiſtory is given of the linen manufacture, and an account of the markets where the produce is ſold. We muſt, here, expreſs our regret, that we have not the cuſtomhouſe abſtracts of theſe exports, nor the ſeal-maſter's accounts of the linen ſtamped for ſale. The population of the county is above 220,000 perſons, or one perſon for every 1¼ Iriſh acre.

The Sixteenth Chapter is on the Obſtacles to Improvement. Theſe are, the number of ſmall farmers; the exhauſting the land by repeated crops of grain; the want of capital to carry on improvements; and the want of good houſes, which occaſions a waſte of ſtraw for thatch, that is neceſſary for the ſupport of cattle.

In this chapter, the corn-laws are in general approved of; but the ſuſpenſion of exportation, in 1796, ſeems to be complained of, not without reaſon.

The Laſt Chapter contains a number of general obſervations; and is divided into fifteen ſections. From theſe we learn, that there is an agricultural ſociety in this county: that the weights and meaſures are tolerably uniform: that the fiſheries are valuable, if they were attended to: that moſt of the landed proprietors and clergy are reſident: that the county was ſurveyed in 1653, by Sir William Petty, anceſtor of the Marquis of Lanſdown; and that a copy of his ſurvey is in the Surveyor General's office: that water-mills are chiefly uſed for grinding all ſorts of grain: that tenants are bound to their landlord's mill: that three different kinds of acres are uſed in meaſuring, the Iriſh, Scotch, and Engliſh: that the inhabitants in general are more ſober than formerly: that the price of cattle, ſheep, and proviſions has riſen very much: and that oxen are harneſſed, but not generally uſed.

In the concluſion to this chapter, the Reporter ſtates, that he has paid every attention to collect and give a faithful relation of the agriculture of the county of Down, and of the other ſubjects connected with it; and with the general proſperity of the kingdom. We are ſatisfied of his diligence, fidelity, and intelligence. On ſome occaſions we have differed from him; but, on many others, we have had reaſon to be pleaſed with his ſurvey.

vey. We have obſerved him giving very judicious directions, where the general practice of the county was not to be commended: And we add with pleaſure, that if the landed proprietors were as humane, and the farmers of this county as intelligent as the rector of Annahilt, the county of Down would advance rapidly in agricultural improvement; more rapidly, indeed, than the Reporter of this ſurvey would lead us to ſuppoſe. For, once the defects of a bad ſyſtem are known, and a few good practices are introduced by landed proprietors, or the better ſort of farmers, the example of a few is quickly imitated, and a ſpirit of emulation prevails among the lower orders of the people. To promote the proſperity of Downſhire, we would ſay to the landholders—'Build comfortable houſes and other farm buildings to your farmers; erect villages in convenient places; exact a moderate per centage as the rent of theſe houſes; give ploughs and other implements as premiums; and aſſiſt with capital any very intelligent farmer, when you make an addition to his farm, or his leaſe.' To the farmers we would ſay—'Clean your grounds with potatoes, or other green crops; but never take more than one white crop, till they lye at leaſt one year in graſs; and put always a green or a black crop between every two corn crops. Spend not the ſummer months in travelling for fuel to diſtant turf bogs; but plough and hoe your potato, turnip and fallow grounds, and you ſhall be able to purchaſe coals for your fuel, with the increaſed produce of your fields.'

What is here applied to Downſhire may be addreſſed to ſeveral counties of Scotland, particularly the Highlands. Wherever ſmall farms are predominant; wherever capital ſtock is ſcarce; wherever the tenure of poſſeſſion is ſhort, or inſecure; unqueſtionably *there will be* found an imperfect huſbandry, and a depreſſed tenantry, together with their concomitants, bad implements and uncomfortable houſes. Indeed, theſe things follow one another ſo regularly, that a pretty correct opinion may be formed of any diſtrict, from a tranſitory inſpection. Ireland, at the preſent moment, may be conſidered as not one ſtep further advanced in agricultural improvement, than Scotland was in 1750; and the meaſures ſucceſsfully adopted in the latter country, could not fail of producing the like happy effects in the former, though a conſiderable time muſt neceſſarily intervene before they could be fully recogniſed.

E. E. H.

BRANCH

BRANCH III.

Agricultural Intelligence.

The ſevere drought, which prevailed through the ſummer and autumn months, occaſioned crops on the eaſtern coaſt of the iſland to be defective in bulk; and ſtack yards may be ſtated as fully one third leſs in ſize than thoſe of the preceding year. Through the weſtern, and many of the midland diſtricts, according to our information, the drought has not been attended with evil conſequences; and from all accounts, the wheat crop may be conſidered as equalling, if not exceeding, an average, except in a few Engliſh counties which were viſited with mildew. The weight of the grain alſo exceeds that of ordinary years; and, from the warmneſs of the ripening ſeaſon, the flour will abſorb a greater quantity of water than cuſtomarily. We ſtated in our laſt, that the quantity and quality of wheat were regulated by the degree of heat which prevailed in the latter part of July and firſt weeks of Auguſt; the truth of which has, this year, been ſtrikingly exemplified.

Oats, which are cultivated to a great extent in Scotland, may, however, be regarded as an inferior crop in almoſt every diſtrict. An exceſs of heat always proves injurious to this grain, making it ſmall and ſhrivelled, with a greater proportion of huſk or offal than happens in ſeaſons of more moiſture. Indeed, it is an aſcertained point, that weather favourable to wheat and barley, is adverſe to oats. A finer appearance was ſcarcely ever ſeen than what the oat-fields univerſally diſplayed in the latter part of June; but the continuance of drought rapidly changed the agreeable picture, and myriads of black inſects or caterpillars, which, in ſeveral diſtricts, lodged upon the ſtalk and ear, contributed to make matters ſtill worſe. It may reaſonably be believed, that theſe inſects were the conſequence, not the cauſe of a failure, and that their attacks would have been unſucceſsful, had the plant not been previouſly in a diſeaſed ſtate. Fat horſes are ſeldom or never troubled with the ſcab; whereas, nothing is more common than for poor ones, to be attacked with that diſorder. We noticed ſeveral oat-fields, in particular ſituations, nay, even contiguous to infected fields, which, in a great meaſure, eſcaped the ravages of the caterpillar, owing to the ſtalks being in a thriving condition, and perſpiration going regularly forward.

Beans, a very important article in many diſtricts, were greatly ſtunted by the drought; and, in many places, will yield a poor return to the farmer. On light ſoils, they were neceſſarily bad; on clays, when mixed with peas, they were tolerable; but on deep loams, though of leſs bulk than uſual, the produce will not be materially defective. Though the grain is rather ſmall, the weight exceeds that of laſt year; and being fully ripened, and well harveſted, it is to be hoped that the deficiency will be inconſiderable.

To turnips and potatoes the dry weather has proved remarkably unfavourable. The plants of the former, at one period, promiſed a plentiful return; but we are ſorry to ſay, that in few inſtances have previous expectations been realized. Attacked in the front by the caterpillar, and in the rear by the worm, a more general deſtruction has enſued than perhaps was ever known. Potatoes have alſo ſuffered much, and cannot be rated as exceeding half of an ordinary crop. Culinary vegetables, of every kind, were much retarded in their growth, and threaten to prove ſcarce articles in the after months.

The grain markets during the quarter, have, on the whole, maintained a kind of equability, though oats, in the courſe of autumn, roſe rapidly in price. From the quantity of wheat and oats imported during the year, it is evident, that the laſt crop, though confeſſedly good, was unequal to the general demand; which ſubſtantiates what we have uniformly maintained, that the conſumption of Britain requires an additional quantity of cultivated land. Exiſting circumſtances have occaſioned of late a great quantity of grain to be thrown into the market; but the truth of our doctrine will perhaps be ſufficiently aſcertained before next autumn arrives, unleſs events ſhould take place (perhaps more feared than neceſſary), which would at once throw trade of every kind out of its common courſe, and ſo prevent any juſt concluſion being drawn. Indeed we have heard meaſures recommended, that would ruin numberleſs individuals, and ſubject the country to famine, or at leaſt to dearth at an after period. Without deſcending to particulars we ſhall only ſay, that ſeveral of theſe meaſures are injudicious, ſome of them impracticable, and others, if executed, would throw the improvement of the country a century backward. Supplies can always be commanded by a ſuperior force, and thoſe who are maſters of the field will never want proviſions while ſuch are to be found in the country.

This has been an unfavourable ſeaſon to the graziers, as the beſt paſture lands rarely afforded a full bite. Stock was purchaſed at high prices, and, latterly, fat cattle have rather depreſſed in value, and ſheep ſtill more ſo; all which things muſt make the trade a bad one. Lean ſtock of all ſorts, particularly ſheep, are looking

down wards

downwards, though it is to be apprehended that the declenſion proceeds from cauſes of a temporary nature. In the preſent ſtate of the country, however, it is difficult to ſpeculate, with preciſion, upon ſuch matters.

Some of our Engliſh readers complain, that the Scotch meaſures of capacity are not underſtood by them, and requeſt an explanation. To ſuch we muſt, in the mean time make a reference to our Firſt Volume, p. 444. where a table is given, which, though not an accurate one, will throw ſome light on the ſubject. In our ſupplementary Number, it is probable that the ſize of the Scotch meaſures of capacity will be further elucidated; but at preſent we may only ſtate, that when a *boll* is mentioned by us, it is the Linlithgow or national ſtandard boll that is meant, which, for wheat, beans, and peas, is a trifle more than four Wincheſter buſhels; and for barley and oats, is rather more than ſix buſhels. By attending to theſe things, the meaſures, uſually condeſcended upon in our work, may be nearly aſcertained.

A copy 'of the propoſed rules and regulations of the Morayſhire farmers fund, for the benefit of widows, orphans and decayed members,' has been tranſmitted to us; and we are in duty bound to obſerve, that ſuch an inſtitution embraces the moſt meritorious purpoſes. It has often been regretted that ſuch inſtitutions were not generally eſtabliſhed for the benefit of agriculturiſts; therefore, we rejoice to ſee a beginning made upon wiſe and rational principles. The propoſers of the meaſure, we underſtand, fought out the beſt advice, and employed William Morgan, Eſq. of London, (nephew of the late Dr Price) perhaps one of the firſt calculators in Britain, to make up the neceſſary tables.

Contenting ourſelves at preſent with wiſhing ſucceſs to the deſign, and an extenſion of the principle in every quarter, we ſhall reſerve for our ſupplementary Number, various particulars communicated by an intelligent gentleman of that county, who took an active hand in the arrangement.

Extracts from Private Correspondence.

SCOTLAND.

Letter from a Gentleman, deſcribing the Crops of Fife and Ayrſhires, Oct. 8.

'I was lately in Fife, and found that the interior of that county had ſuffered ſeverely from ſuch a dry ſeaſon, and that the crop could not be eſtimated at more than two thirds of an ordinary average. I have ſince been in Ayrſhire, and learned that the drought had rather been beneficial as injurious to that diſtrict. The Ayrſhire huſbandry, in my opinion, ſtill continues very bad, though the land is moſtly all encloſed, and

ornamented with planting. The hedges are generally of hawthorn, frequently mixed with privet; which, keeping its leaves long, is a great advantage. A plan of planting hedges in Ayrſhire and in the pariſh of Mearns in Lanarkſhire, is to put the thorns into the face of a ſtone wall, to grow through it from a bank on the other ſide, which I conſider to be a bad ſcheme, as the ſtones incumbent on the hedge muſt check its growth greatly. The lands in the neighbourhood of Irvine, are the fouleſt I ever ſaw any where. I obſerved no ſummer fallow in Ayrſhire, and was informed that nine tenths of the leaſes in that diſtrict, prohibit the tenants from having more than one third of their farms under tillage. Some of them are reſtricted to one fourth.'

Letter from an extenſive Farmer in Dumfrieſſhire, Oct. 8.

'The weather during harveſt was remarkably good, and the crop, with ſome trifling exceptions, is now ſafely ſecured. We do not ſow much wheat in this quarter; but what we have is good, and ſo is barley. Oats are rather light, and not well filled; but we had an abundant crop of hay, which ſells at 9d. and 10d. per ſtone of 24 lib. The grain market is dull. Wheat 6s. 6d. and 7s. Old oats 3s. Of barley, little or none is yet ſold, our chief demand being from Liverpool and other places in Lancaſhire.

'The ſale of cattle in England is not ſo briſk as ſome time ago, and prices lower. At Broughhill fair, cattle freſh in condition brought good prices, but lean ones ſold with difficulty. Sheep had a dull ſale, and at reduced prices; and my opinion is, that a greater fall will ſtill be felt, owing to the immenſe numbers daily coming from the Highlands. I was lately in Northumberland in ſearch of breeding ewes, and purchaſed ſome of the beſt Leiceſters at 63s. per head. This ſort is infinitely ſuperior to what is called the Bamburghſhire breed, and I ſtrongly recommend them to every farmer who poſſeſſes decent land. He ſhould ſtudy, however, to ſelect the real kind, otherwiſe his profit will be inferior to thoſe who are more fortunate or attentive. My wedder hogs, this year, weighed from 20 to 26 lib. avoirdupois per quarter, and ſold at 54s. per head. I had my tups from Mr Culley, and now poſſeſs a ſtock preferable to any in this county.'

Inverneſſhire Quarterly Report.

The harveſt around Inverneſs was finiſhed ſeveral weeks ago, but ſome fields are ſtill ſtanding out in the Highland diſtricts of the county. In point of produce, whether corn or ſtraw is conſidered, the crop is much worſe than I remember to have ſeen, and may be eſtimated as fully one third below an average. What wheat we have is good in quality. Barley much ſuperior to laſt year's growth; but oats are very inferior. From the beginning of April to the 22d September, we had no rain worth noticing; of courſe the hay crop was very bad, nor is that of turnip much better. Potatoes have of late grown rapidly, and promiſe ſtill to make a tolerable return.

Very

Very little grain of this crop is as yet brought to market; but oat meal ſells for 24s. and 25s. per boll of nine ſtone, and barley meal at 18s. per boll of ten ſtone. It is generally believed that conſiderable ſupplies of grain will be wanted for this county. Butcher meat, which was very high-priced through the ſummer months, has lately dropped much, and will continue to fall till the graſs beef and mutton are diſpoſed of; but there is every appearance, from the ſcarcity of turnips, that a great riſe will take place in the latter part of winter, and through the ſpring, upon theſe articles.—*October* 15.

Banffſhire Quarterly Report.

The crop is moſtly ſecured in this county, but proves more deficient in bulk than any in our remembrance. Notwithſtanding the unuſual proportion of old grain which remains unthraſhed, the ſtack-yards appear to be one third defective. The difference of land was never more diſcernible than in this ſeaſon; for the quantity and quality of grain depended much more upon ſoil than cultivation, which often is not the true criterion. Deep loams had in every reſpect the advantage, and produced crops equal, if not ſuperior, to thoſe of ordinary years; while the thin clays and gravels, in many inſtances, have hardly made returns ſufficient to defray the expence of ſeed and labour. From trials already made, it appears that oats will nearly yield meal for corn. The merchants price of old meal is 18s. or 18s. 6d. per boll of eight ſtone; and in retail, this is ſold at 14½d. and 15d. per peck.

There is ſtill ſmall demand for barley; nor are ſales of any conſequence expected, ſo long as the preſent high duties on malt continue. It is probable, that this grain will remain like a drug on the farmer's hand. We have not much wheat; but what was raiſed this ſeaſon is of excellent quality.

The demand for cattle was not great till the month of September; but a good number have been ſold ſince that time. Thoſe in good condition are ſuppoſed to be worth 9s. per ſtone ſinking the offal; but thoſe for the ſtraw-yard have ſunk one third in value. Stots and queys, not under three years of age, are ſtill in requeſt; and it is expected that the ſtock which will remain in the country, will not be much ſhort of the uſual number, but, generally ſpeaking, a year younger than formerly. It is to be apprehended that, from the great failure of turnips, and the ſcarcity of provender, there will be a difficulty of ſupplying the butcher market, and doing that juſtice to the growing ſtock neceſſary to enſure their arrival at perfection at the uſual period. Potatoes are very unproductive.—*October* 15.

Letter from a Roxburghſhire Farmer, October 16.

'We had fine rains in the beginning of Auguſt, which ſerved the fields of late grain conſiderably, but were not ſufficient to recover the graſs lands. Our grain harveſt advanced very faſt after the middle of Auguſt; and from the fineneſs of the weather and the lightneſs of the crop, the expence of harveſting did not exceed that of common years,

notwithſtanding that ſhearers wages were very high. The crop does not bulk well, wheat excepted; and from trials made, oats do not yield meal equal to expectation. Barley is unequal in quality. Beans and peas are not extenſively ſown in this county; but what we have of the former are much complained of. The wheats, both winter and ſpring, prove very gifty, and of fine quality; but potatoes are much below an average; and the turnip fields will not yield more than half their uſual produce, notwithſtanding of which, they are ſelling from 6 to 8 pounds per Engliſh acre.

'Fat cattle are ſelling high, and expected ſtill to advance. Fat ſheep are not plentiful; but from the great quantity of half-fed ones that muſt be diſpoſed of at this time, mutton is greatly reduced in value. We have very little demand for grain at preſent, and can hardly quote prices. Oats and barley, I believe, may be reported at 20s., and wheat at 38 to 40s. *per* Berwick boll of ſix Wincheſter buſhels.'

Selkirkſhire Quarterly Report.

The exceſſive heat which followed the rains of July 19th and 20th, puſhed on the grain crop very faſt; and the vegetable creation, which was beginning to wear a faint and languid aſpect, immediately aſſumed a thriving appearance. The rains which fell in the two firſt weeks of Auguſt, proved alſo very beneficial, by preventing the crops from being prematurely ripened.

In the higher parts of this county, corn and graſs have yielded returns equal to an average; but in the lower grounds, where the ſoil is drier, the ſtraw was rather ſhort, though the ear was full-ſized and properly matured. On the whole, the crop of this county may be fairly reported as equal to an average.

Irrigation was lately introduced on the Duke of Buccleugh's eſtate in this county, and bids fair to be attended with conſiderable advantages. Many of our lands are well calculated for receiving improvement in this way; and it is to be hoped that the practice will be extenſively diffuſed.

In conſequence of the goodneſs of hill paſtures, and the unparalleled mildneſs of the ſeaſon, ſheep ſtocks are in good condition, though the recent depreſſion of prices will cut deep into the farmer's profit. This depreſſion, though unfavourable to them, is certainly favourable to other claſſes of the community, and affords cauſe for the public at large to ſay that the year is crowned with the Creator's bounty.—*October* 17.

Letter from a Gentleman in the Diſtrict of Carrick, October 14.

'Since the beginning of June, we have had a tract of the moſt admirable weather ever remembered in this county; and, ſince the commencement of harveſt, there has been ſcarce a ſingle day to interrupt the labours of the important ſeaſon;—no ſhaking winds, nor rotting rains, nor chilling froſts, to blaſt the labours of the huſbandman. An uninterrupted courſe of near two months of fine drying weather in the

the time of harveſt, is a phenomenon in this part of the country, which is expoſed to the damps and ravages of the Atlantic Ocean. It will be unneceſſary to add, that the crop has been cut down and got into the barn-yard in the very beſt order; and from the kindly nouriſhing weather in the months of June, July, and Auguſt, there is every reaſon to ſuppoſe that the quality will be good. Any little trials that have been made, juſtify this opinion. From the ſevere ſhock, however, which it received in the months of April and May, the crop, in point of quantity, will not exceed an average one, if it ſhall amount to it; both the wheat and the oats being rather thin; as is the caſe alſo, in many places, with the turnips: But the ſuperior quality will probably compenſate for the defect in quantity. Grain markets have remained with little variation from the laſt quarter, though rather lower, upon the whole, than the high rents, price of labour, and additional public burdens, would require, in order to balance the capital and the trouble expended in agriculture, with the degree of riſk that muſt always attend it. With regard to the cattle and ſheep markets throughout this part of the country, there ſeems to be a total ſtagnation, and many graziers muſt no doubt ſuffer conſiderably. Various cauſes are aſſigned for this; and perhaps all of them contribute more or leſs to this depreſſion; ſuch as, the different banks contracting their credit; the ſevere drought in England leſſening the winter keep; and the ſtagnation in manufactures all over the country. The price of butcher meat is ſtill dear enough to the conſumer; but it would have been deſirable, that the ſhock had not been ſo ſudden; for when any one deſcription of people ſuffer, others muſt ſuffer with them, according to the old Latin adage, 'Nam tua res agitur, paries cum proximus ardet.'

Letter from Falkirk, October 15.

'Amongſt the numerous quarterly reports ſent you, I have regretted that there has not yet appeared in your Magazine one for Stirlingſhire, as it is a county of ſome importance in many reſpects. The corn market at Falkirk is one of the moſt conſiderable in Scotland; it may indeed be called the Haddington of the weſt. The diſtrict of the Carſe, in point of mere fertility, is not exceeded by any in the kingdom, and, even under its preſent management, produces weighty crops, and affords high rents. The annual cattle markets or tryſts at Falkirk, have long been reckoned the moſt conſiderable in Scotland. In caſe you may not, however, be furniſhed with a more general quarterly report for the county, I ſend you the following ſketch for this neighbourhood.

'From the almoſt unparalleled fine weather which has prevailed, I believe generally over the kingdom, the operations of harveſt have been carried forward with an uncommon degree of celerity, at the ſame time in a very ſatisfactory way, and are now completed in the moſt perfect manner. The moſt palpable ignorance, or inexcuſable indolence, could ſcarcely have gone wrong this year. The ſtack-yards have been all cloſed ſome time, and they afford a charming proſpect. Wheat is a-

very good crop indeed; giving both abundance of ſtraw, and grain of excellent quality. It is gennerally allowed to be our beſt crop, and conſiderably to exceed an average. Very little ſmut has been obſerved: this however took place, to a very deſtructive degree, in the fields of one perſon, who had not pickled his ſeed, probably undervaluing this eſſential precaution. Beans are alſo equal to, or probably above, an average, and very good in quality. Barley is a very abundant crop, and in quality far ſuperior to that of laſt year, and indeed fully equal to the moſt fortunate ſeaſon of our variable climate. If the Legiſlature, in its wiſdom, do not adopt ſome effectual meaſure, founded on an unequivocal and broad baſis, to enable our Scots barley to maintain, according to its real value, a fair and equal competition, at leaſt in our own market, with that of our ſouthern neighbours, reared under a kindlier climate, the Scotiſh farmer will be driven, however reluctantly, to blot out altogether from his rotation this valuable crop. Some farmers have already ſubſtituted the potato oats in its place, and perhaps this year without much loſs. Where the land gets the ſame work as for barley, the young graſſes will be found to thrive equally well; and a heavy crop of theſe oats is not ſo liable to lodge, and to deſtroy them, as a heavy crop of barley under the ſame circumſtances, and they may be ſown as late in the ſeaſon. I adopted this plan myſelf this year. My oats were ſown the 20th of April, after three ploughings, and reaped the 20th of Auguſt; the graſs moſt excellent indeed. The late malt-tax is really a matter of the moſt ſerious conſideration to the landed intereſt of Scotland and even moſt ſo to thoſe who poſſeſs fine rich turnip ſoil, where barley follows with ſo much advantage.

'I cannot here help remarking, I had almoſt ſaid regretting, that the very ſuperior quality of our barley this year, may ultimately turn to our diſadvantage; becauſe, if an inqury into the comparative value of the barleys of England and Scotland, as ſuggeſted in the Houſe of Commons, ſhould be inſtituted, I am convinced that we will come much nearer to them, than we would do on an average of ſeaſons; and therefore, though an apparently fair and impartial deciſion may be given, it will be really erroneous, inaſmuch as a different reſult would be the conſequence of ſuch a comparative trial in ordinary ſeaſons. In our northern diviſion of the iſland, we may not again have ſo much ſun in one ſeaſon for the next half century. Oats are by far our worſt crop, and, unlike the reſt, are generally deficient, and, as far as I have learnt, inferior in quality to thoſe of laſt year. This is the more to be regretted, ſo far as reſpects the comfort of the labouring part of the community, as another article on which they depend much, is alſo very defective; I mean potatoes. They do not exceed half a crop: they were ſtunted, in the firſt inſtance, by the drought, and their growth checked by froſts; but, being taken up under the moſt fortunate circumſtances, they are of good quality, and will prove very nutritious.

'The young graſſes do not in general wear a promiſing appearance, although particular fields are very luxuriant. Hay was a very deficient crop. The price has, however, been low with us, as the Carron Company

pany and collieries, who are the great conſumers here, require a ſmaller ſupply than uſual, having a good deal of laſt year's on hand. The general price was ſixpence from the rick, but it is now rather dearer. There can ſcarcely be recollected a ſeaſon ſo favourable for conducting the fallow proceſs in the moſt perfect manner, as this has been throughout. Nothing but the moſt ſtupid inattention could have prevented a complete fallow; and yet this unaccountable ſtupidity was very apparent in many inſtances; whereas, in all clay diſtricts, a perfect fallow ought to be the ground of their hopes for ſeveral ſucceeding years. The wheat-ſowing is finiſhed under the moſt auſpicious circumſtances; and on many fields the braird is appearing.

'Little grain has yet been ſhown in our market; the farmers being more intent on field operations during this uncommonly fine weather, than in thraſhing out. The prices may, however, be quoted. Wheat, 24s. to 27s.; Barley, 18s. to 21s.; Beans, 19s. to 21s.; Oats, 18s. to 22s.

'The tryſt this week, I believe, very much diſappointed the general opinion reſpecting the price of cattle, which was expected to be conſiderably lower, eſpecially of thoſe for turnips, the diſtillery, and the ſtraw-yard. They, however, as well as fat, maintained prices equal to laſt year. We cannot, therefore, reaſonably expect the butcher market to be lower for a conſiderable time.'

Morayſhire Quarterly Report.

HOWEVER favourable the bypaſt ſeaſon may have been to the grain crops of other diſtricts, to this county it has proved peculiarly baneful. From the 7th June, till our harveſt was completed, we had ſcarcely a drop of rain, and none of conſequence ſince 19th April. The ſummer heats were all along exceſſive, often accompanied by ſcorching winds, extremely injurious to our ſands, light loams, and ſtrong clays. On ſuch, barley and oats are uncommonly deficient: they are only tolerable on moiſt rich loams. An ordinary ſeaſon admits of 10,000 bolls export from this county; while crop 1803, now that it is in the ſtack-yard in fine condition, will ſcarcely ſupply our internal conſumpt; and importation might be requiſite, were it not for ſome old ſtock on hand.

The quality of our wheat is excellent, in many inſtances not inferior to the produce of Eſſex, and may this year paſs off to advantage in Mark-Lane, where Scotiſh wheat ſeldom goes, but with loſs to the exporter. It comes pretty near an average in point of quantity; and now we are getting the new crop ſown in fine condition.

Turnips, although they have of late mended, are ſtill a thin deficient crop. Want of this valuable root, added to the ſcarcity of fodder, will be ſeverely felt by many; not only as it leſſens the immediate profit on cattle, but alſo the quantity of manure for next crop; without a large portion of which, our thin ſoils will produce nothing. In the mean time, it is ſo far fortunate, that now the demand for cattle has again come round at tolerable prices to the breeder, but with loſs to the grazier who bought in May and June.

Hay

Hay is plentier than might have been expected. There ſeems no want for the ordinary conſumpt of the county; and it may ſell from 15d. to 18d. per ſtone of 20 lib. Amſterdam.

For new grain, there is no price yet fixed. Old oats ſell at 23s. to 24s. per 5 firlots Stirling meaſure; barley at 20s. to 22s. 6d. per 4 firlots; but for this grain the ſale is, and muſt remain, extremely limited, unleſs a check is put to the importation of Engliſh barley, by a further increaſe of duty. Many cargoes have found their way to the Moray Frith; and diſtillers and brewers ſee their intereſt in uſing it, in preference to the country produce. Individuals are blamed for carrying on a traffic, ſo prejudicial to the agriculture of Scotland; but, while the Legiſlature gives toleration, it will be continued, though all the preſent importers ceaſed to exiſt.——*Oct.* 15.

Letter from Glaſgow, 19th October.

'Our harveſt has been exceedingly favourable, and all the corn has been ſecured in excellent condition, if we may except a few parcels about the Moorlands. Wheat proves a very fine crop, both in quantity and quality. Oats will be ſhort in the ſtraw, but will turn out well, both in the barn and the mill.

'Barley in this neighbourhood will be very good. The quantity ſown was trifling. Beans and peas are of excellent quality. Not much of theſe grains was ſown laſt ſeaſon with us. Potatoes have not turned out ſo well, neither in quantity nor quality, as was once expected.

'The market for wheat, ſince our laſt, has been on the decline. Oats have advanced a little. We have had little or no demand for barley, the diſtillers not having been at work for ſome time back, and our brewers having a conſiderable ſtock to begin malting.

'The importation into Clyde, this year, has been very great. Since the 1ſt July, about 21,000 quarters wheat, 10,000 barrels flour, 21,055 quarters oats (allowing 38 lib. to the buſhel), and 4684 tons oat meal, have arrived from America and Ireland. The above wheat and flour, with a few more cargoes ſtill expected from America, will make a very good ſtock for the winter. We cannot help remarking, that the American wheat this ſeaſon is very poor in quality; conſequently, ſcarce a cargo arrives in good order; however, it is not ſo much hurt as to render it unfit for uſe; and, along with the fine wheat we have in this country, will make a very good mixture. A tolerable ſupply of oats is expected from Ireland and the ſouth of Scotland through the winter, ſhould the critical ſtate of the country not prevent it. Annexed you have a ſtate of our market.

'State of Glaſgow Markets, October 19th.

'American wheat,	25s. to 28s.	of 240 lib.	per boll.
Iriſh ditto,	26s. to 28s.	ditto	ditto.
Dantzic ditto,	30s. to 32s. 6d.	Linlithgow meaſure.	
Britiſh ditto,	26s. to 30s.	ditto	ditto.
Iriſh oats,	17s. to 21s.	of 264 lib.	per boll.

Engliſh

Engliſh new oats,	22s. to 24s.	Stirling meaſure.
Ditto old barley,	22s. to 24s.	
Scots ditto,	15s. to 17s.	
Beans and peas,	21s. to 24s.	
Oat meal,	20s. to 21s. 6d.	per boll of 140 lib.
Ditto ditto, new,	22s. to 24s.	ditto ditto.

Hay, 7d. per ſtone Troy weight.
Straw, 4d. ditto ditto.
Beef, 10d. to 1s. per lib. of 22 oz.
Mutton, 8d. to 1s. ditto ditto.'

Wigtonſhire Quarterly Report.

THE preſent diſpoſition of the weather is uncommonly favourable for the wheat-ſeed. That which is already ſown has literally got a dry bed, for the duſt was flying after the harrows, as in April; ſo that we have reaſon to hope good effects will follow. Our potato crop, though in general three weeks later than uſual, will be very abundant; conſiderable quantities of which are yearly exported to England and to Glaſgow, and which, it is thought, will find a ready market. Our turnips, upon the whole, will be an equal crop, though perhaps not quite ſo bulky as laſt year's.

The fall on lean ſtock, and conſequent recent failures of a number of our cattle dealers, have given the farming intereſt a ſevere ſhock. There is no evil, however, in human life, but might have been worſe. One lucky circumſtance attends thoſe loſſes—there are but very few among us who are not able to bear them. Farmers of large capital, like the ſtately oak, can ſtand the ſtorm. It is thoſe only of ſmall capital, and great enterprize, that deſerve our commiſeration. And in theſe times of public diſtruſt, it is hoped the gentlemen of landed property will ſee it to be their *trueſt intereſt* to ſtep forward in ſupport of induſtry and enterprize.

With regard to *keeping* ſtock, very few ſales have taken place of late. At preſent, nobody wiſhes to buy; and nobody, who can do otherwiſe, wiſhes to ſell. At ſame time, it may be obſerved, that the demands for Galloway cattle of late years have been ſo great, and the prices offered to holders ſo tempting, as made many of them part with thoſe they intended to have kept another year; inſomuch that, excepting in ſome particular ſituations, only our young ſtock are on hand. Thoſe few farmers and graziers among us who hold *St Faith's cattle*, have ſet off to England at the head of their own droves; for, unleſs it be the Meſſrs Smiths and Meſſrs Corſans, who are drovers of large capital, few others, in the preſent ſituation of affairs, can be truſted. But when we look on our abundant crop of hay, large ſtack-yards, and ſpacious fields of turnips and potatoes, we have good reaſon *gatefully* to conclude ourſelves more highly favoured by '*the God of harveſt*' than moſt counties in the United Kingdom.

Good butcher meat ſtill maintains the uſual price, 6d. per lib., though inferior muir-mutton is ſelling at 4d. As it is thought the importation

portation of Iriſh grain will be but very limited this ſeaſon, prices of oats are rather looking upwards.

The newſmen are timeouſly calling upon the farmers to thraſh off all their grain; giving it as a reaſon, that the carriage *up the country*, in the event of French invaſion, will thereby be rendered more commodious! The writer of this report feels himſelf called upon, however unpopular the ſubject, to remark, that, at preſent, the price of corn bears, and for ſome time paſt has borne, no proportion to the advanced price of labour, land, &c. &c.: and therefore he does not ſee the ſmalleſt neceſſity for thraſhing *all off immediately*; more eſpecially, when it is to be conſidered, that our military forces are *now* fully ſufficient to repel any army the French Conſul can bring againſt us. Look around, I beſeech you, and behold what a vaſt body of brave volunteer corps, and faithful yeomanry troops, occupy our embattled plains! Add to theſe, our regular army, our militia, our army of reſerve. And ſay, what have we to fear? Contemplate this vaſt force united! And, ſurely, that mind whoſe confidence is not thereby fully reſtored, we may ſafely conclude to be under the cloud of melancholy.—*October 19th.*

Aberdeenſhire Quarterly Report.

The drought, which ſet in early, continued with increaſed vehemence through the ſummer months; and the ſmall quantity of rain, which fell about the middle of Auguſt, being ſoon abſorbed by the returning drought, occaſioned crops of all kinds, with a few exceptions, to be much ſtunted. Here and there a few fields of early ſown bear were good; but the generality of that grain proved quite the reverſe, and of leſs bulk in the ſtack-yard, than ever remembered. Oats were alſo a poor crop, being thin on the ground, ſhort in the ſtraw, and of inferior quality. Peas were not abundant in ſtraw, but well podded, and yielding fine grain. Perhaps the ſtack-yards, on an average, are one third leſs in ſize than laſt year; but, as the harveſt was much earlier than common, and no damage received from wind or rain, the crop has been ſecured in the moſt perfect ſtate; and, in proportion to its bulk, will turn out uncommonly productive.

Potatoes are fine in quality, but rather deficient in quantity. Turnips, where the ſeed had vegetated early, are a good crop; where late ſown, or where the ſeed had lain long in the ground, they are of little or no value. Paſtures, of all deſcriptions, have continued bare through the ſeaſon; and the aftermath, or ſecond clover, is equally bad. The graſs ſeeds ſown in ſpring, preſent a bad appearance. Indeed, *keep* of all kinds for farm ſtock is ſcarce, and the appearance of plenty at as great a diſtance as ever.

Under the above adverſe circumſtances, the demand for cattle almoſt ceaſed about the beginning of harveſt; and prices came down nearly 20 *per cent.* For ſome weeks paſt, ſales have been made, and upon better terms. At Turreff market, this day, good beaſts ſold pretty freely. Butcher meat has fallen but little; and grain has rather advanced, beſt

oat

oat meal ſelling at 20s. per boll. Very little field work is yet performed, it not being the cuſtom of this county to enter the plough till the harveſt is completely finiſhed.——19*th October.*

Fifeſhire Quarterly Report.

PERHAPS in no ſeaſon has there been a longer continued tract of dry weather than in 1803; in conſequence whereof the hay crop was very light, and no ſecond crop of clover anywhere in this county. The victual crops (wheat excepted) are very ſhort in the ſtraw; but well ripened, and harveſted in excellent order. Wheat very fine, and gives well in flour. Barley, having in dry ground almoſt no ſtraw, is a deficient crop. On cold land, it is very good; but, in the county at large, barley, peas, and beans, are much below an average crop. The oats ſomewhat below, but not ſo much. Wheat is at leaſt one third above an average. A very large quantity of this grain is ſown on ground in fine order, which is looking very well, and the farmers are ſtill ſowing more.

Potatoes, in conſequence of want of rain in ſummer, though of good quality, fall ſhort in quantity, and cannot be taken at more than half a crop.

Turnips have univerſally failed all over the country, the very beſt not being half a crop. Whole fields, after ſpringing thick and beautiful, periſhed by the drought; the ſurviving plants are poor and ſtunted in ſize.

Flax is a ſhort crop, but of fine quality, and may be reckoned rather below an average; the ſeed is very fine, and much of it fit for ſowing next year.

From actual trial, Scots lintſeed, ſaved from ſeed once ſown from Holland, is found to produce a crop of flax equal in all reſpects to that from the beſt Dutch ſeed; but if not changed, it degenerates, and the crop will not a ſecond time equal the foreign produce.

Average price of hay 7d. per ſtone. No market for barley, and much of laſt year's crop remains unthraſhed.—*Oct.* 20.

Berwickſhire Quarterly Report.

WE have ſeldom experienced a tract of more favourable harveſt weather. Reaping commenced about the middle of Auguſt; and the crops in the low diſtrict were all got into the ſtack-yard, by the 1ſt of October, in excellent condition. The harveſt in Lammermuir, though latterly retarded by rain, is now alſo ſafely concluded.

From the warmth of the ſeaſon, and the uncommon drought, corn of every deſcription came ſo rapidly forward about the end of Auguſt, that a ſufficiency of hands could hardly be procured for taking it down in proper time. Reapers wages were from 1s. 10d. to 2s. 4d. per day, with victuals.

Wheat is very fine in quality, and will turn out better than an average crop per acre. Barley may be reckoned equal to an average, and

and the quality in general good. Oats prove a light crop, having ſuffered more from the drought towards the beginning of harveſt, than either wheat or barley; owing probably to ſo great a proportion of them being uſually ſown upon the lea furrow, a ſituation in which the ſoil is more expoſed to the influence of drought than almoſt any other; the grain is ſmall, and the returns per acre will fall rather ſhort of an average. Beans in general are an indifferent crop; peas are exceedingly gifty. Upon the whole, though the crop this ſeaſon is, in ſome caſes, deficient in bulk, the aggregate return will probably exceed that of ordinary years.

Paſturage was ſo long at a ſtand from the drought, that the rains, ſince the middle of September, have made little alteration on it, being ſtill univerſally ſcanty. Young clovers are weak and backward, and have, in many caſes, been entirely burnt out. Good turnips have let as high as 8l. and 9l. per Engliſh acre. Of the late ſown fields, a great proportion are quite ſtunted; and thoſe of the beſt quality will not, this year, attain their uſual ſize; ſo that the general crop will be conſiderably deficient in weight. Potatoes have turned out a pretty middling crop, notwithſtanding the drought. Wheat fallows were prepared in the moſt complete ſtyle, and the early ſown fields have everywhere made a promiſing braird.

In conſequence of the little demand from the ſouth, prices of lean ſtock have experienced a very conſiderable reduction during this quarter; ſheep, in particular, have been ſelling 20 per cent. lower than laſt year. Fat has alſo fallen a little.——*Oct.* 21.

Tweeddale Quarterly Report.

At the head of Tweed, and other waters in the higher pariſhes of this diſtrict, which are generally enveloped in too moiſt an atmoſphere, the dry ſeaſon was uncommonly favourable for the paſture; but in many places, there were complaints of its ſcarcity, particularly in the latter end of July and beginning of Auguſt. The hay crop has, however, turned out ſomething like an average, the price from the rick being 7d. and 8d. per ſtone; but white fodder being conſiderably deficient, the price may be expected to riſe, in the event of a ſevere winter taking place.

Potatoes were greatly retarded in their growth by the cold ſpring weather, and alſo checked by the early froſts in harveſt. Turnips have nowhere failed, though univerſally below an average crop. There are not many blanks, but the bulbs are ſmaller in ſize than ordinary.

The price of fat lamb did not fall during the ſeaſon. That of *crock ewes*, ſold for turnip feeding, has declined of late at the rate of 25 per cent.; though, perhaps, the Falkirk riſe of black cattle may come round to ſheep alſo.——*Oct.* 22.

Eaſt.

Eaſt-Lothian Quarterly Report.

If the quality of grain is to be determined from the quantity of ſaccharine matter therein contained, and if the quantity is regulated by the degree of heat which prevails during the ripening ſeaſon (poſitions generally admitted), then, it may ſafely be believed that the grain of the preſent crop will turn out as good as any reaped for many years paſt. Perhaps oats muſt be received as an exception, this plant being a kind of aquatic, requiring a conſiderable degree of moiſture in the ſeveral ſtages of growth, without which it cannot be expected to arrive at perfection.

From numerous trials already made, the truth of the above doctrines is fully exemplified. Wheat yields a great return in the barn, weighs heavier than in any ſeaſon remembered, and abſorbs a greater quantity of water than uſual; of courſe, a given quantity is of ſuperior value to the conſumer. The ſame may be ſaid of barley, where it was fully and equally ripened. Beans and peas are likewiſe of greater weight than uſual; but oats are much inferior to the growth of laſt ſeaſon; even the variety called potato oats, appears to have temporarily degenerated. All the grains, however, except wheat, are of ſmall bulk in the ſtack-yard, though it is preſumed the return per acre will not be far ſhort of the average bolls.

Independent of the injury received by oats from the exceſſive dryneſs of the weather, it deſerves to be ſtated, that myriads of black inſects or caterpillars infeſted this plant in the ripening ſeaſon, and in fact ſucked out the heart's blood thereof, which ought to have gone for the nouriſhment of the grain. Theſe inſects were more numerous on the majority of fields than even in 1800, and the conſequences would have been the ſame, had ſimilar weather prevailed in autumn. At that time, the grain dropped from the ſtalk upon the ſmalleſt motion; but the want of moiſture at harveſt, prevented the like loſſes as were then experienced. In 1785, the ſame effects were produced. Indeed, both theſe years, like the preſent one, afforded oats of inferior quality; conſequently returned a defective produce in bolls to the owner.

The turnip crop has ſuffered moſt ſeverely in this uncommon ſeaſon; and in no year, ſince the introduction of this root, have greater loſſes been ſuſtained by thoſe who raiſed it. Stunted originally by drought, the feeble plant fell an eaſy victim to the hoſt of caterpillars and worms that afterwards attacked it; and even fields that were thought to be out of danger, were obliged at laſt to give up. It would be an arduous taſk to attempt an aſcertainment of the loſs which muſt neceſſarily follow; for it is not the value of the crop itſelf which muſt be calculated, but the loſs of manure, the derangement of rotation, and the utter inability of breeders and feeders to carry on their ſtock: Theſe are things deſerving great conſideration.

Very little aftermath or foggage has been got this ſeaſon, which has not only occaſioned a great inconvenience, but even a heavy expence to many farmers. The grazier's trade throughout has been a bad one.

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In few inſtances, was a full bite gained. Stock was high purchaſed; and the late depreſſion of prices, joined to the difficulty of keeping on, occaſioned great loſſes, eſpecially where ſheep were the prevailing article. Perhaps an advantageous turn may again be expected, the demand for butcher meat being ſo great in Britain, as to require, on the whole, a greater ſupply than can be readily afforded. A glut, ariſing from temporary cauſes, latterly took place; but this, it may be preſumed, cannot laſt long.

The market of Haddington has, ſince autumn, been fully ſupplied with grain, and the demand has born affinity to the quantity preſented. Oats, about the end of September, roſe in price with great rapidity, but have now come conſiderably down. Barley is in ſmall requeſt; and, notwithſtanding the goodneſs of its quality, threatens to be of leſs value than any other grain cultivated by the farmer. The immenſe revenue levied upon this article when uſed for malt, and the ſubſequent duties during every ſtage of its manufacture into ſpirits and ale, will account for its depreſſed value, when compared with that of other grains.

The ſowing of wheat very early commenced this ſeaſon, and has been continued under the moſt favourable auſpices. A greater breadth of ground will be occupied with wheat than cuſtomarily; the fineneſs of the weather, and failure of turnips, having enabled almoſt every farmer to extend the culture of this grain. It deſerves, however, to be noticed, that when early ſowing is practiſed, ſay in the middle of September, a great deal leſs ſeed, perhaps one third, ought to be uſed, than when the work is poſtponed to the ſucceeding month. Early wheat, if ſown thick, does not tiller in the ſpring; hence the ſtraw, owing to this miſtaken management, is ſmall, eaſily lodged, apt to receive mildew, and produces weak grain: all which things may be remedied by thin ſowing, when an early ſeed-time is adopted.

The clovers have planted badly; and in many places, the deficiency is ſo great, that it is unneceſſary to let them ſtand for a crop. Independent of the loſs ſuſtained in the firſt inſtance, a derangement of the ſucceeding rotation is an evil which cannot be avoided, and will occaſion croſs-cropping to a conſiderable extent.——*Oct.* 24.

Mid-Lothian Quarterly Report.

The harveſt in the lower part of this county began about the middle of Auguſt, and the crop was got into the ſtack-yards almoſt without a ſhower. The quickneſs of the work, however, occaſioned a correſpondent demand for reapers, and high wages were given in the Edinburgh market, and other places. So far all was fair; but, to the diſgrace of our police, a ſet of people were allowed not only to demand extravagant wages for themſelves, but to maltreat others, who had agreed to ſerve upon lower terms than thoſe fixed upon by the ſovereigns of the market. Some of the fineſt days for harveſt operations were thus ſpent in tumult and riot; an evil which calls for the ſerious conſideration of thoſe who have the power to correct it.

Notwithſtanding

Notwithſtanding the indifferent appearance of the wheats in ſpring, they ſuſtained the ſeverity of the drought better than other crops, and promiſe to be very productive. Conſiderable doubts, however, are entertained, that the oat crop is of a different deſcription, eſpecially what was produced upon light ſoils. Barley is unequal. Upon deep ſoils, in good condition, it is not only of fine quality, but will yield a plentiful return. Such fields as received much ſpring work, came up unevenly, and the produce is coarſe. Beans and peas are univerſally ſhort, and potatoes are very ſcanty.

From repeated obſervations, it is believed that thoſe farmers are moſt ſucceſsful, who truſt little to the ſpring time for cleaning their land. Should the ſeaſon be favourable, the young plants get a ſtart that enables them to combat adverſe circumſtances afterwards; but if the ſeaſon is unfavourable, ſeed work is executed with difficulty, and often to little purpoſe. This doctrine applies particularly to the barley fields, which often pay the farmer imperfectly, becauſe they have not been prepared in the proper ſeaſon.

Turnips hardly deſerve the name of a crop. Thoſe fields which ſprung equally, and withſtood the dry weather in the early ſtages of their growth, were aſſailed by the caterpillar in Auguſt, and very few have been able to withſtand the attack. Thoſe that remain are ſickly, have a fœtid ſmell, and ſhow bulbs not much larger than potatoes. Such a pitiful crop has not been ſeen ſince the introduction of turnips into this country.

From the want of after graſs, and the failure of turnips, both black cattle and ſheep have been puſhed prematurely into the ſhambles, which will operate ſeverely againſt a ſuitable ſupply at an after period. The laſt tryſt at Falkirk exhibited few fat cattle, but a conſiderable number of lean ones appeared, which went off at much higher prices than expected. The laſt day of the market had a greater ſale than the preceding ones, and all were ſold.——*Oct.* 21.

ENGLAND.

Letter from a Scotch Gentleman, dated Clifton, near Briſtol, July 26.

'Since writing you laſt (p. 363.), I have made a long tour through the ſouth part of Suſſex, Hampſhire, Wilts, Dorſet, Devonſhire, Cornwall, and am now ſtationed, for the preſent, in Somerſet. To deſcribe ſuch a tract of country, where much is to be admired, and a great deal to be cenſured—where a proper ſyſtem of agriculture would double the preſent riches of the country—where nature, ſoil, and climate, have done ſo much, would require a much abler pen than mine. I ſhall endeavour, however, to give you a ſhort, but very inadequate ſketch, of the beautiful and romantic county of Devonſhire.

The boundaries you will ſee deſcribed upon the map of England, ſtretching from the Engliſh Channel on the one ſide, to the Briſtol

Channel on the other. Nearly acroſs the middle of the county runs the ridge of Dartmoor hills, high, bleak, and barren, fully as much ſo as our northern Grampians. They ſtretch from near the Engliſh Channel towards the Briſtol Channel, but do not join it; the country becomes lower, and is partly taken up with the foreſt of Exmoor, part of which is in Somerſetſhire. That part along the Engliſh Channel, conſiſts of beautiful valleys, running back from the ſea to the interior, bounded by high hills, and the country along the fine river Ex.

'The ſoil, in general, in the valleys, and on the ſides of the hills, is a fine deep brown, or reddiſh clay, properly mixed and tempered with ſand. On the banks of rivers or rivulets, the ſoil is deep, having been waſhed down and accumulated by the water. The tops of the hills are very barren, being covered only with whins or heath, and paſtured with ſheep. There are no ſurface ſtones, though in many places a ſtratum of rock or ſtone runs along below the ſoil, which covers it to the depth of three or four feet. Unleſs upon the ſides of the hills, the ſtone is of a ſoft open nature, being concreted ſand and clay, and penetrated by the waters, except towards Cornwall, where it is in a hard ſtate, and lies nearer the ſurface. As to their ſyſtem of agriculture, they have no fixed plan, each diſtrict differing, perhaps each pariſh. Their principal crops are wheat and barley, a few oats, beans, and here and there a ſmall field of turnips. Some farmers ſow clover and rye-graſs for hay; but the principal part of the hay here, as well as in moſt parts of England, is from natural, or what they call meadow-graſs. They principally perform their farm work with oxen, wrought either in the plough or the wain, in the old Scotch faſhion. The plough is a moſt clumſy inſtrument, with a ſmall wheel in the point of the beam; or, like the Suſſex plough, the beam reſts upon a low carriage and wheels, ſimilar to the carriage of a Norfolk plough, but lower. The plough itſelf reſembles ſomething of an ill-ſhaped Norfolk one, with a very long pointed ſock, a beam, and ſcarcely any mould-board. This awkward inſtrument cannot be expected to turn a very large or proper furrow.

'Their cattle are very handſome; much the ſame as the Suſſex cattle; the colour generally either a dark or light brown, with fine tapering horns. They are, however, narrow behind, and ill ſet upon the hind legs, which appears to me a great blemiſh in theſe otherwiſe handſome cattle. Their ſheep are of the Dorſet breed, but larger, from ſuperior feeding. This breed is ſo well known to you, from the county ſurveys, and the Engliſh writers on agriculture and ſheep farming, that I need ſay little of them. They are fine bodied ſheep, completely white, and generally horned, but rather long upon the legs. The Dorſet ewes lamb very early, uſually in the month of December, or beginning of January; and, in the diſtrict I am writing of, it is no uncommon thing to have graſs lamb at Chriſtmas, the ewes being fed upon the young graſs during the time the lambs are ſucking. Along with the richneſs of their ſoil, the excellence and earlineſs of the climate is ſuperior to any in England. Snow never lies there, not even upon the

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tops of the hills. They have no winter, unleſs ſometimes wet weather during the months of January and February.

'In the neighbourhood of Exmouth, I found an induſtrious intelligent Yorkſhire man, who, about ten years ago, ſettled there, and was the firſt that introduced the burning of limeſtone. The ſtone is brought from the oppoſite ſide of the bay, and the coals from Wales or Sunderland. The lime is of a fine white colour, and coſts nearly the ſame price as the Sunderland lime. The farmers are now beginning to uſe it upon ſuch grounds as they fallow. Wood of different kinds grows here to a large ſize. Myrtles, and many of our plants, which are confined to the green or hot-houſe, flouriſh in the open air with great luxuriancy.

'The banks of the river Ex, which is navigable for ſmall veſſels as far as Topſham, afford, in my opinion, the richeſt proſpect in England.

'Nature has ſhaped the grounds, and art has embelliſhed them with noble ſeats, villas, gardens, orchards, &c. It appears, for miles, as one continued garden or orchard. On the 16th July, when I paſſed, many fields of wheat and barley appeared nearly fit for cutting.

'After all this, it is a painful taſk to cenſure, particularly to a ſtranger who received many civilities. Would you imagine that, in ſuch a country, they have not what deſerves the name of a road, nay, ſcarcely of a foot-path? Many of the turnpike roads do not exceed nine feet in breadth; and, for miles, it is impoſſible for two carriages of any kind to paſs. A perſon is obliged to go before, to give warning for you to ſtop at certain places; otherwiſe a meeting becomes a dangerous buſineſs, as you cannot get off the road, the hedges being ten or twelve feet high. The roads run, in the ſame manner as they did five hundred years ago, over the tops of all the hills; as they ſeem to think it better to cut down a hill, than go round it. The roads are covered with enormous banks of earth, full of thorns, briars, brambles, and weeds of all kinds, under the name of a hedge, planted ſo full of trees that no loaded cart can paſs, if the load is higher than the top of a common poſt-chaiſe. You will ſcarce, then, believe me, when I tell you, that a great part of their work here is performed by horſes, with *packets* or *creels* affixed by a ſaddle to their back, in the ſame manner as in the moſt northern Highlands of Scotland. Even in the great city of Exeter, you ſee a poor horſe bending under a great load of brick or ſtone, affixed to his back by theſe means. Their coals, and, in ſhort, every thing, is carried in this manner upon horſes backs.

'Their fields, as in moſt parts of England, without any regard to the ſituation of the grounds, or conveniency of tilling them, are thrown into every ſhape the imagination can form, ſurrounded by immenſe banks, under the name of hedges, full of all the noxious weeds that can grow. Theſe are allowed to ſhed, and conſequently ſcatter themſelves all over the adjoining fields. This has often ſtruck me, in my travels through England, as a moſt ſhameful defect in their agriculture.

A man that allows such a nuisance, ought to be indicted for hurting his neighbour's property. I am obliged, at present, to conclude; but, at another time, will give you a few more observations upon this fine county.'

Letter from Chester, September 24.

'The harvest in this neighbourhood is now nearly finished; and I have the pleasure of informing you, that our crops are both abundant in quantity, and of excellent quality. Some little exception must be made in respect of oats, which are blighted in several places.

'Such wheats as have appeared at market, are the handsomest samples I recollect of having ever seen; and the current price is 8s. to 8s. 6d. per 75 lib. The dry weather will likely cause a great demand for oats and inferior barleys, as an additional quantity must be used in lieu of common provender; and so the price of these articles will keep up. None but the best qualities of barleys will be sought after by maltsters, on account of the heavy malt-duty. Inferior barleys will scarcely be saleable at any price, unless for the purpose already mentioned.'

Essex Quarterly Report.

Never was a finer season known for gathering in the harvest, than the last: there was not a single day's rain to interrupt it; and it has continued dry till within this month, since which time we have had some refreshing showers, which were much wanted for turnips, cole-seed, &c. Wheats which were injured by the worm in the winter, in a great measure recovered; but when in the ear, received a second check by the blight, which proved most injurious to the thin plants, and to those particularly (though thicker) on cold heavy lands.

The blight was however partial, and some have, no doubt, excellent crops; but as the quantity of straw is so great this year, the expence of thrashing is dearer, as it cannot be supposed the corn will arise in proportion to the bulk. Upon an average through the county, it is not thought that the wheat crop is defective. Barley and oats are fine, bright, and productive; as are peas and beans, which were not the least infected by the insect. Hops average from 8 to 12 cwt. per acre, and were sold at the late Essex fairs, from 5l. to 6l. per cwt. There was a piece of ground, of two acres English, at Castle Hedingham in this county, which produced 56 cwt. This was an extraordinary crop.

Turnips, owing to the dry weather, were long of appearing; and after they had been once hoed, the leaves were entirely dissected by a black caterpillar, which gave them a most singular appearance: after a time they began to shoot afresh, when the fly again attacked them, so that there are but few good ones. It may, perhaps, be worthy of remark, that manured turnips were throughout least affected by it; and in one field, where some were manured and some not, the latter were entirely destroyed, whilst the others remained nearly untouched.

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The weather afforded a fine opportunity for making good fallows. Wheat sowing has some time ago commenced; and, with the early farmers, the plants are making an appearance. Labourers are very scarce, in consequence of the drafts for the army. In some cases, 50l. has been given for men to serve for those balloted for the army of reserve. The rates, this year, in Bocking, will not be less than 30s. per pound, the war being the cause of the baize trade being nearly laid aside. What a burthen is this upon farmers, who, when the trade flourishes, are not in the least benefited by it? Very little stock was sold at Braintree, nor Billericay fairs, last week. The prices were high; and the principal graziers unwilling to accede to them, the beasts were brought up in good condition.——*October* 17.

Norfolk Quarterly Report.

The harvest was concluded, and the wheat sowing begun under the most favourable appearances. Scarce a cloud intervened to interrupt the progress of the former; and such has been, since the conclusion of it, the happy variations in weather, from dry to moist, and *vice versa*, that the drill, the dibble, the plough, and the drill-roll, are all actively and well employed. There has been sufficient drought to allow time for cleaning the fallows; and lately, a sufficient quantity of moisture, to allow the breaking up of the grass, or, as they are called in this country, *ortlands*; a corruption, I presume, of old lands: and before the expiration of this month, wheat sowing will be very generally completed.

The barley crop of this year was certainly very great upon the ground, and promises to be productive in the barn, and of superior quality, both as to colour and weight. The pea and oat crop are also plentiful. Wheat is extremely bad; not one half of an average crop, and unusually thin and defective in weight. Many acres were cut down, merely to litter the yards, and to be thrown to the hogs. I should suppose the average weight cannot exceed, if it can equal, 55 lib. per bushel. Beans are not much grown in this district; but where they are, they are good in quality, but will be short in quantity. The turnip crop is extremely partial, and generally defective on the good wheat soils; and scarce one acre in twenty has come to the hoe. The artificial grasses, on which, in this country, we depend principally for our hay, were short and unproductive. This scarcity of food has occasioned a very considerable decrease in the price of cattle. Lambs were bought much cheaper at the late fairs, than they were sold last year; the prime not averaging more than 17s. per head. Pigs are 50 *per cent.* cheaper than they were three months since. Norfolk wool was sold for 48s. per todd, and the South-Down as high as 52s.; and long wool is now selling at 30s. to 31s. per todd. The present price of wheat is from 42s. to 60s. per quarter. Barley, 22s. to 23s. Oats, 20s. to 24s. White peas, 48s. to 50s. Grey peas, 34s. to 36s. per quarter. The late very heavy additional duty on malt certainly contributes much to depress the price of barley; and I confess I am persuad-

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ed the proſpect to the agriculturiſts is not at preſent very encouraging, though the rage for hiring farms does not yet appear to have much cooled. The preſent price of grain, I am confident, cannot allow the farmer a living profit on the capital employed.——*October* 18.

Letter from a Farmer in Wales, October 18.

'Since I wrote you in July, we have enjoyed a continuance of dry weather, and, of courſe, a moſt favourable harveſt. In the lower diſtrict, reaping commenced in the firſt week of Auguſt; and, by the firſt of September, nearly the whole crop was ſafely ſecured in the rick yard. Wages for reapers went very high; no leſs than 2s. 6d. and 3s. per day beſides board; and, when cut by the piece, 6s. per acre, together with board, was paid for merely cutting and laying down. Barley and oats are uniformly cut with the ſcythe; but hooks are uſed for wheat, though ſome people have lately tried the ſcythe for this grain, our mode of reaping by the hook being ſhamefully negligent. The crop is of inferior bulk to the preceding one; but the grain is generaliy of good quality, the major part of oats excepted: theſe are ſmall, of a bad colour, and tough to thraſh; though before harveſt they had an excellent appearance.

'The dry weather impeded the growth of our turnip and potato fields. Our hay crop was good; and a large ſtock of laſt year's produce being in hand, it is to be hoped that ſufficient provender will be found in the diſtrict for ſupporting the beſtial. The graſs grounds, even thoſe of the beſt quality, are quite burnt up, which occaſions many people to reſort already to hay for ſupporting the working oxen. During the laſt three months, the prices of cattle have dropped greatly, owing, as I preſume, to the ſcarcity of graſs in the Engliſh feeding counties; and many breeders and graziers have given their ſummer graſs for nothing. The ſame with ſheep. Pigs are hardly worth one half of their laſt year's value; but butter and cheeſe are higher than ever known. Wheat is ſlow of ſale, owing to the want of water at the mills. The ſowing of this grain is far advanced; and with many farmers it would have been finiſhed, had not the ſeverity of the drought interdicted the ploughing of clover leas, eſpecially where the ground is of a ſtiff or obdurate nature.'

Northumberland Quarterly Report.

For the laſt three months, the weather has been almoſt uniformly dry. The only rains that have fallen in that period were in the firſt week in Auguſt, the third week in September, and the beginning of October. The firſt came very opportunely for ſaving the turnip crop, and for reſtoring vegetation to the graſs lands, the paſtures being at that time completely eat up, and cattle in the greateſt diſtreſs for want of food. The ſucceeding dry weather was peculiarly favourable for the harveſt. Crops of all kinds were probably never better ſecured; and there having been no high winds to occaſion any ſhake, they were never

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got in with leſs loſs. An excellent opportunity was alſo afforded, by this dry ſeaſon, for completely cleaning the wheat fallows; and the rains in the third week of September reduced them to the fineſt tilth poſſible; and the wheat ſeed, both on the naked fallows and drilled bear ſtubbles, was never put in under more favourable circumſtances.

The wheat fields were generally thin, having been much injured by the winter froſts; but the continued dry weather through the ſummer, favoured this crop very much. Few inſtances of any diſeaſe, blights, &c. appear; and no defective parts in the ear, the grains being all completely perfected, and the ſamples remarkably fine.

The barley and oats were injured in dry ſoils by the drought, and are below an average crop; but the quality of both is good, though rather ſmall in the grain; the ſamples are beautifully fair, and particularly proper for the London market, to which the greateſt part of our beſt oats are generally ſent. The peas and beans were ſhort in the ſtraw, but well podded, and may be reckoned nearly an average crop.

Turnips ſuffered materially from the extreme drought, upon all dry ſoils; and though the rains in the beginning of Auguſt were the ſalvation of a great many crops, yet there were many others that did not recover the check they had received, and afterwards became mildewed. No doubt there are ſome remarkably good ones, yet it is generally conſidered that turnips are below an average crop; and ſuch as are good are now ſelling from 8l. to 9l. an acre. Potatoes are alſo conſidered as a failing crop.

The markets for live ſtock are ſtill very good, though ſomething lower than the prices of laſt year. Beef is expected to be a ſcarce article next ſpring, and is already advancing. A number of buyers appeared yeſterday at Wooler fair, and prices revived, to the great ſatisfaction of our ſheep breeders.——*October* 18.

Letter from a Yorkſhire Farmer, October 20th.

'The dry weather greatly injured our turnips, and the crop will be very indifferent, though the late rains have improved them in many places. They have been ſold as high as 7l. 10s. per Engliſh acre, to be eaten with ſheep upon the ground. Our hay crop is good, and well got; but, as we have no after-graſs (fog), and as many people are already under the neceſſity of giving hay to their cattle, prices may ſoon be expected to be high. The wheat crop is good; ſo is barley; but oats and beans are ſuppoſed not to be equal to one half of laſt year's crop. A good deal of wheat has been put in upon the fallows; and we are buſy preparing the clover leas. Wool is on the advance; but every other thing appears to be lowering,—rents, wages, and taxes excepted.'

Yorkſhire Quarterly Report.

We have had another remarkably fine harveſt; but the weather, from the exceſs and long continuance of the drought, has been by no means ſo favourable to the farmer, during the latter end of the ſummer, as might

might have been wiſhed. Dry weather is generally moſt favourable to the leading crop, wheat; which, accordingly, is thought an unuſually abundant crop: yet, ſo great a proportion of that grain has ſuffered materially from the mildew, that it cannot yield, on the whole, that product, both in reſpect to quality and quantity, that was promiſed by the very flattering appearance of the crops in their earlier ſtage of ripening. However, many good ſamples are ſhown in the markets, which, notwithſtanding, do not command a price by any means adequate to what might very reaſonably have been expected from the great number of thoſe of inferior ſorts.

Barley and oats are fair average crops; but beans are very defective in general. Potatoes are not half a crop. Beſt wheat 7s. 6d; barley 4s.; oats 3s. 6d.; beans 6s. per buſhel of Wincheſter. Potatoes 4s. per buſhel, upheaped. Apples 2s. to 4s. per peck; yet the latter are abundant in produce.

Rape was not ſown in any great quantity in this diſtrict, but was tolerably productive of ſeed—the price about 40l. per laſt. Flax was a good crop, and well crowned with ſeed, which ſells at about 12s. per buſhel.

The unuſual dryneſs of the ſeaſon has rendered the complete fallowing of ſtrong ſoils a perfectly eaſy operation: but, from the ſame cauſe, the produce of the turnip crop will be ſcarcely adequate to one third of the common average. The better ſort, though ſmall in root, are ſelling to the ſtock-maſters and jobbers at five guineas per acre: an excellent price to the grower. We have lately had a moderate ſupply of rain; ſince which, much wheat has been ſown in very good order, and in ſome fields it already begins to appear in blade. The young ſeeds are not of ſo ſcanty a ſward as was expected; but there is little or no graſs either in the paſtures or meadows. The proſpect is rather gloomy to the ſtock-farmer, as a very poor price is offered for ſuch ſtore cattle and ſheep, as he cannot find means of ſupporting through the approaching winter.

Cattle and ſheep for ſtore are rapidly declining in price. Hay as rapidly riſing, and now ſelling from 6l. to 8l. per ton. Fat cattle and ſheep are alſo lowering. Beſt beef 7d. to 8d.; Mutton, Veal, and Pork 6d. to 7d. Butter 1s. 6d. per lib. avoirdupois.——*Oct.* 20.

Letter from London, Oct. 24.

'On inquiring, I find that the bean crop, which was generally allowed to be a ſmall one, turns out better in ſeveral diſtricts than originally expected; but ſtill it will be defective. Peas, on the whole, are alſo below an average; but the grey varieties of this grain, lately offered at market, are of excellent quality; and the ſupply of both greys and boilers was laſt week greater than we have for a long time received. The account of barleys is ſtill very favourable, and the produce preſented is of a fine quality. Wheat is not ſo generally hurt by blight and mildew, as was reported. The crop of this grain is large,

large, but the ſamples hitherto brought to market are not ſo handſome as laſt year's. Oats are a good crop; and the quality of ſuch as has been ſhown, is ſuperior to what might have been expected, conſidering the ſeverity of the drought. In the Fen diſtricts, oats turn out an abundant crop. Indeed, the ſeaſon was particularly calculated for every kind of grain in ſuch ſituations.

'Turnips have generally failed; and many farmers have been ſowing a ſpecies of barley, which ſtands the winter, as a ſupply of ſpring food for their ſheep. After being eaten down during the winter and ſpring months, even ſo late as the month of May, it is allowed to ſtand for a crop, and proves eminently beneficial.

'Our ſupply of wheat this day, at Marklane, was large; but ſales were made on terms much the ſame as for ſome weeks paſt. Oats were in conſiderable requeſt, but peas of all kinds were a trifle lower. The crop of hops is great, and the duty is reckoned at 170,000l.; laſt year it did not exceed 24,000l.; though, the year before, it reached 240,000l.: ſo fluctuating is the growth of this article. The price of hay is advancing.

'State of London Markets, Oct. 24.

Wheat 50s. to 54s. per quarter.	Feed oats 29s. to 30s. per quar.
Fine do. 60s. to 62s. ditto.	Polard do. 30s. to 32s. per do.
Barley 22s. to 26s. ditto.	Malt 52s. to 59s ditto.
Winter barley 8s. per buſhel.	Hay 5l. to 5l. 15s. per load.
Hog peas 38s. per quarter.	Straw 32s. to 36s. per do.'
Boiling do. 52s. to 56s. per do.	

Liverpool Meteorology, 1803.

July 1803.

Changeable at the beginning, with little rain.—9th, Fair ardent ſuns.—13th, Rather windy; fair till the 20th; then a thunder ſtorm; wind veered from N. W. by N. to W. by N.: Fair to 28th: Showery to the end.

Greateſt approxim. of wind to N. Rain, more or leſs, eight days.

	In.	Dec.		In.	Dec.
Fall of rain,	1	54	Evaporation of water,	3	0

Auguſt 1803.

Much rain at beginning.—3d, Windy: Still rain: Fair and ſun.—20th, Rain in gentle ſhowers.—27th, Windy.—29th, A little rain to the end.

Greateſt approxim. of wind to W. Rain, more or leſs, thirteen days.

	In.	Dec.		In.	Dec.
Fall of rain,	1	88	Evaporation of water,	2	88

September 1803.

Cloudy, miſty rain.—4th, Ardent ſun: Still fair and dry.—15th, Rain and windy: Rain to 22d: Fair 27th: Fog A. M.—30th, Much rain. Hygrometer being 3 inch. 6 dec.

Greateſt approxim. of wind to N. Rain, more or leſs, ſeven days.

	In.	Dec.		In.	Dec.
Fall of rain,	1	6	Evaporation of water,	2	25

Postscript to Scotish Intelligence.

Argyleſhire Quarterly Report.

The harveſt is now nearly cloſed. The crops in general are remarkably good, except on wet grounds, where the growth was ſo much retarded by the cold of the ſpring, that the corn did not ripen fully, and was therefore cut rather green for meal; but it is believed it may do for ſeed-corn. The weather, during the whole harveſt, has been the fineſt ever remembered, till within theſe few days that it has been wet and ſtormy. The potatoes are larger in quantity, and better in quality, than uſual. The price of them, and of every kind of grain, is moderate, and likely to continue ſo, from the abundance of the crops. Butter and cheeſe keep their prices; but that of ſheep, is fallen 4s. or 5s. a head; and of black cattle, from 20s. to 30s., and the demand far from being briſk. The butchers have not yet lowered their prices in proportion. Mutton ſells at 5d. and beef at 6d. the Engliſh lib. The *tack* of herrings, this ſeaſon, has as yet been very inconſiderable. ——*October* 19.

NOTICES TO CORRESPONDENTS.

A Supplementary Number, of Four Sheets, will be publiſhed with the Index; and we requeſt that our Reporters, in the different diſtricts, would favour us with a detail of Improvements recently executed, in order that a Retroſpective View of Agriculture for 1803 may be prepared. Any hints applicable to the ſubject will be gratefully received.

Letter Second '*On the Nature, Improvement, and Qualities of the different Soils proper for Rearing Sheep*,' is come to hand, and ſhall have due attention paid to it.

A Deſcription of the *Stafford Plough*, with Remarks thereupon by a Practical Farmer, ſhall be preſented in the Supplement; together with the Second Letter *on Thraſhing Machines*, which, contrary to our inclination, has been too long withheld.

A Memoir of the celebrated *Cockburn* of Ormiſton is in hand, and will be given in the Supplement, provided that a Portrait of that eminent perſonage can in time be procured. Any additional information, concerning the Improvements introduced by Mr Cockburn, will be acceptable.

Our Yorkſhire Friend's '*Defence of Oxen as Beaſts of Labour*,' ſhall not be neglected. In our opinion, the Noble Peer, whoſe ſentiments are eſpouſed, will be much obliged by ſuch effective ſupport.

The valuable Eſſay '*On the Poor Laws of Scotland*,' lately received, ſhall be reſerved as the opening Paper of our next Volume, as it likely will produce ſome diſcuſſion. A great number of other Communications have been received, which we have not room to particulariſe.

*** The Supplementary Number will be publiſhed on Wedneſday, 21ſt Dec. price One Shilling; and No. 17, on Monday 6th Feb. 1804.

ERRATA.—P. 381, 18 lines from top, for *graſs* read *croſs*.
Same page, 8 lines from bottom, place the comma after the word *cheeſe*, inſtead of *dairy*, as printed.
P. 435, 19 lines from top, for *herefore* read *therefore*.